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THE USE OF INTRAVENOUS BASERGIN IN THE THIRD STAGE OF LABOR*†

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The steadily rising incidence of maternal deaths due to hemorrhage demands that the medical profession give serious consideration to any measures which contribute to the reduction of blood loss.

Impetus to clinical study of the prevention of hemorrhage has been given by the recent discovery of the new ergot alkaloid, ergonovine. At the same time the development of apparatus for accurate measurement of blood loss has been of inestimable aid in evaluating results.

In September 1937, following an unexplained increase in the incidence of postpartum hemorrhage on the Obstetrical Service at Lincoln Hospital, we began a clinical study of the value of two of the new ergot preparations.

Lincoln Hospital is a municipal institution with only ward service. The majority of normal deliveries are attended by junior interns who spend an average of one month on the service, under the supervision of a trained resident who is in charge of the service for six months. Operative deliveries are performed under the direction of some member of the attending staff.

The two new ergot preparations used were Basergin (ergonovine tartrate) in ampules containing 0.2 mg. and Neo-Gynergen, a combination of 0.125 mg. of ergonovine with 0.25 mg. of ergotamine in both tablets and ampules.‡

During the entire period, 1 c.c. of Neo-Gynergen was administered intramuscularly after the delivery of the placenta. At the beginning of the experiment, the routine use of 0.5 c.c. of Pituitrin in the third stage was discontinued but was soon resumed because of noticeable increase in blood loss.

Immediately preceding the study of the series under consideration, 393 consecutive patients were given 1 c.c. of Basergin intramuscularly at the beginning of the third stage of labor.

Our present analysis began on February 4,

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* From the Obstetrical and Gynecological Service of Lincoln Hospital, New York City.

† Read at the New York Academy of Medicine before the Section on Obstetrics and Gynecology, March 28, 1939.

‡ Material for experiment supplied through the courtesy of Sandoz Company.

TABLE 1

Postpartum Hemorrhage

NAME	AGE (YEARS)	PARITY	PERIOD OF GESTATION	POSITION OF FETUS	TYPE OF DELIVERY	AMOUNT OF BLOOD LOSS	DURATION OF LABOR	ANALGESIA	ANESTHESIA	REMARKS
S.	33	1	41 wk.	L.O.A.	Spontaneous	700 c.c.	14½ hr.	None	Open-drop ether	No attempt made to hasten delivery of placenta. Class 3 cardiac in decompensation. Bleeding permitted for therapeutic purposes. Third stage, 5 minutes.
H.	39	1	30 wk.	Breech	Assisted breech; 2° laceration of the perineum	1,200 c.c. plus	2 hr.	None	G.O.E.	Bleeding chiefly from lacerated cervix and 2° laceration of perineum. Duration of third stage, 2½ minutes.
McK.	32	6	28 wk.	L.O.A.	Version and breech extraction	800 c.c. plus	7 hr.	None	G.O.E.	Bleeding chiefly from placenta praevia. Duration of third stage, 3 minutes.
D.	37	1	40 wk.	R.O.A.	Spontaneous	650 c.c.	14 hr.	None	G.O.	Bleeding chiefly from placenta praevia. Normal removal after 24 minutes.
J.	20	1	41 wk.	L.O.A.	Spontaneous; episiotomy and repair	650 c.c.	20½ hr.	None	G.O.E.	No note made of chief source of bleeding. Duration of third stage, 2 minutes.
C.	18	0	39 wk.	L.O.A.	Low forceps; episiotomy and repair	500 c.c.		None	G.O.E.	Uterine atony. No other complication. Duration of third stage, 5 minutes.
S.	38	0	42 wk.	L.O.A.	Low forceps; episiotomy	750 c.c.	24 hr.	None	G.O.E.	Bleeding about equally divided between uterus and episiotomy wound. Uterus did not contract well. Hypertension; toxemia. Third stage, 3 minutes.
H.	20	0	40 wk.	L.O.A.	Spontaneous; episiotomy	730 c.c.	21 hr.	Sodium amytal gr. 6	G.O.	Most of blood loss from episiotomy wound. No complications. Third stage, 8 minutes.
B.	33	2	30 wk.	R.O.A.	Version and breech extraction; central placenta praevia	1,000 c.c.	3 hr.	None	G.O.E.	Bleeding chiefly from central placenta praevia. Placenta removed manually following version and breech extraction. Third stage, 2 minutes.
M.	16	0	42 wk.	L.O.A.	Spontaneous; episiotomy	600 c.c.	8 hr.	None	G.O.E.	No note of source of greatest amount of bleeding. Duration of third stage, 6 minutes.
G.	21	0	40 wk.	R.O.A.	Spontaneous; episiotomy	600 c.c.	8 hr.	Paraldehyde	G.O.E.	Practically all bleeding from episiotomy wound. Duration of third stage, 4 minutes.

C.	29	0	41 wk.	O.A.	Spontaneous; 2° laceration of perineum	500 c.c.	6½ hr.	None	None	Bleeding chiefly from uterus. Duration of third stage, 6 minutes.
H.	23	1	40 wk.	L.O.A.	Spontaneous; intact perineum	550 c.c.	9½ hr.	Seconal and paraldehyde	None	Bleeding chiefly uterine. Delay of 8 minutes following delivery before Basergin was administered. Duration of third stage, 7 minutes.
S.	26	1	40 wk.	R.O.A.	Spontaneous; intact perineum	550 c.c.	3 hr.	None	None	Bleeding from uterus. Delay of 3½ minutes before Basergin was administered. Placenta delivered ½ minute following Basergin; bleeding ceased.
De Y.	17	0	40 wk.	R.O.A.	Spontaneous; 2° laceration of perineum	550 c.c.	38 hr.	Seconal	G.O.E.	Delay of 5 minutes following delivery before Basergin was administered. Placenta delivered 1 minute later. Bleeding chiefly uterine.
P.	22	1	39 wk.	R.O.P.	Spontaneous; intact perineum	500 c.c.	14 hr.	Seconal	G.O.	Bleeding chiefly uterine. Placenta delivered 1 minute following administration of Basergin.
H.	19	0	41 wk.	L.O.A.	Spontaneous; episiotomy	600 c.c.	7 hr.	None	G.O.	Large gush of blood as placenta was expressed. Placenta delivered 2 minutes after administration of Basergin.

1938, at which time we instituted and continued as far as practicable for one year the routine intravenous injection of 1 c.c. of Basergin in the beginning of the third stage of labor.

During this time, 1,617 patients were delivered, classified as follows:

Primiparae	33.5 per cent
Multiparae	66.5 per cent
White	89 per cent
Colored	11 per cent
Episiotomies	455
Low forceps	277
Mid-forceps	14
Breech extractions	60
Versions	11
Caesarean sections	16*

* Unless contraindicated, routine inhalation anesthesia was employed for all normal deliveries. A variety of analgesics was used, including Seconal, rectal ether with or without Acid-Alurate and paraldehyde (in a small series).

TECHNIC

Immediately after the completion of the second stage of labor, the uterus was palpated as usual to rule out multiple pregnancy and the fundus was followed down. One c.c. of Basergin was rapidly injected into one of the veins of the antecubital space.

The fundus was held until the onset of the uterine contraction. As soon as the uterus was well contracted, firm downward pressure was exerted in the axis of the uterus, the other hand being placed just above the symphysis to prevent descent of the uterus into the pelvic cavity, as described by Pastore.[1] The Credé method was not employed. The method may be termed 'expression of the placenta.'

Slight traction on the cord was considered permissible. As the placenta was delivered, care was taken to allow the membranes to peel off gradually, since this process is slower than the placental separation.

After the placenta had been examined and found complete, 1 c.c. of Neo-Gynergen was injected intramuscularly.

TABLE 2

Retained Placentae

NAME	AGE (YEARS)	PARITY	PERIOD OF GESTATION	DURATION OF LABOR	TYPE OF DELIVERY	ANALGESIA	ANESTHESIA	DURATION OF THIRD STAGE OF LABOR	AMOUNT OF BLOOD LOSS	REMARKS
C.	22	2	42 wk.	8 hr.	Spontaneous	None	None	1 hr. 22 min.	100 c.c.	Not adherent but retained by a tightly contracted cervix. Removal with G.O. two fingers in cervix. Removal easy.
S.	19	1	39 wk.	6½ hr.	Spontaneous; 1° laceration of perineum	None	G.O.	1 hr. 2 min.	100 c.c.	Adherent and retained placenta. Removal difficult owing to the contraction of the lower segment.
H.	22	0	40 wk.	23½ hr.	Spontaneous	None	G.O.	20 min.	150 c.c.	Retained placenta adherent to lower segment in one small part. Easy removal.
D.	37	1	40 wk.	14 hr.	Spontaneous	None	G.O.	24 min.	650 c.c.	Manual removal of retained and adherent placenta; adherent to lower segment.
McG.	37	4	40 wk.	3 hr.	Spontaneous; intact perineum	None	G.O. and cyclopropane		350 c.c.	Manual removal of 3 adherent cotyledons; no note made as to site of attachment.
A.	21	1	29 wk.	7 hr.	Spontaneous; intact perineum	Seconal	G.O.E.	52 min.	180 c.c.	Manual removal of non-adherent placenta lying free in uterine cavity.
B.	33	2	30 wk.	3 hr.	Version and breech extraction; central placenta praevia; no perineal laceration	None	G.O.E.		1,000 c.c.	Placenta torn during operative delivery. Patient bleeding profusely; indication for manual removal which was done immediately after delivery of a viable baby.
F.	21	0	40 wk.	21 hr.	Spontaneous; intact perineum	Seconal and paraldehyde	G.O.E.	14 min.	175 c.c.	Manual removal of adherent and retained placenta. No note made as to site of attachment.
C.	24	1	39 wk.	13 hr.	Spontaneous; intact perineum	Paraldehyde and Gwathmey	G.O.E.	20 min.	350 c.c.	Manual removal of adherent retained placenta. No note made as to site of attachment.
L.	23	0	38 wk.	16 hr.	Spontaneous; episiotomy	Seconal	G.O.	46 min.	125 c.c.	Manual removal of adherent and retained placenta. No note made as to site of attachment.
E.	40	0	40 wk.	28 hr.	Low forceps	Gwathmey and alurate	G.O.E.	42 min.	300 c.c.	Adherent placenta. Contraction ring at junction of upper and lower segments of uterus.
P.*	31	1	28 wk.	19 hr.	Spontaneous	None	G.O.E.	2 hr. 50 min.	75 c.c.	Contraction ring at junction of upper and lower segments. Placenta retained and adherent.

B.	25	2	41 wk.	5 hr.	Spontaneous	Seconal gr. 7½	G.O.E.	50 min.	200 c.c.	About ⅓ of placenta presenting at vulva but firmly adherent. Contraction ring about mid-fundal region.
H.	27	0	40 wk.	11 hr.	Low forceps; episiotomy	None	G.O.E.	16 min.	100 c.c.	Adherent and retained placenta. Easy manual removal.
N.	29	0	38½ wk.	3 hr.	Spontaneous	None	G.O.	1 hr. 25 min.	250 c.c.	Adherent and retained placenta. Manual removal easy.
P.	20	1	39½ wk.	6 hr.	Spontaneous	None	G.O.	50 min.	250 c.c.	Cervix firmly contracted. Placenta adherent. Easy manual removal.
L.	30	2	40 wk.	12 hr.	Spontaneous	Seconal gr. 7½	G.O.	21 min.	1,250 c.c.	Placenta expressed but remained attached by one small fragment. Some difficulty in finding cleavage plane.
D.	24	2	44 wk.	12 hr.	Spontaneous	None	G.O.	1 hr. 30 min.	600 c.c.	Adherent placenta. Contraction ring at about mid-corpus region. Hourglass. Easy removal.
B.	24	3	41 wk.	5 hr.	Version and breech extraction	Seconal gr. 7½	G.O.E.	Very few minutes	500 c.c.	Removal because of bleeding from a partially-detached placenta. Placenta accidentally torn from uterus.
S.	30	0	37 wk.	8 hr.	Spontaneous	Seconal gr. 7½	G.O.E.	1 hr.	Moderate	Adherent and retained placenta. Cervix tightly clamped down. Removal easy.

* Morbid postpartum course for 7 days; then normal.

OBSERVATIONS

Following the intravenous injection of Basergin, firm contraction takes place in from 30 to 90 seconds in the vast majority of cases. Rarely, contraction was delayed as long as 6 minutes, and in a few isolated instances there was no appreciable effect, necessitating either the use of a second ampule of Basergin or massage.

The length of the third stage of labor varied from a few seconds to 14 minutes (exclusive of cases of retained placentae and one or two instances in which the placenta was expressed after 1 hour). The average length of the third stage was 2.3 minutes. These figures corroborate the results previously reported by Tritsch and Behm[2] in a smaller series of cases.

In no case in our entire series was any systemic effect observed.

POSTPARTUM HEMORRHAGE

During the latter part of our experiment, we employed the blood-measuring apparatus described by Fortin.[3] Because of the unreliability of estimated blood loss, we are analyzing only the 637 cases with measured blood loss. In 637 cases the average total blood loss was 133.1 c.c. In 173 operative cases it was 222.0 c.c., and in 464 nonoperative cases it was 100.1 c.c.

Based on a criterion of a total blood loss of 500 c.c. or over, there were 17 cases of postpartum hemorrhage in this series, an incidence of 2.66 per cent. On the usual criterion of 600 c.c. the incidence was 1.73 per cent. An analysis of the 17 cases (table 1) of postpartum hemorrhage was as follows:

1	1,200 c.c. (breech delivery with laceration of cervix)
1	1,000 c.c. (central placenta praevia)
1	800 c.c. (version with placenta praevia)
3	700 c.c. and under 800 c.c.
5	600 c.c. and under 700 c.c.
6	500 c.c. and under 600 c.c.

Of these 17 cases, there were 9 attributable to uterine atony, in 3 of which there was a delay of 3½, 5 and 8 minutes respectively before Basergin was given. One cardiac patient (class 3) was permitted to bleed for therapeutic purposes. In 3 cases episiotomy was considered at least partially responsible. There were 3 cases of placenta praevia and 1 case of laceration of the cervix.

RETAINED PLACENTAE

The prompt and active expression of the placenta is the most important factor in the prevention of a high incidence of manual removal. It was learned early in the series that a completely separated placenta may be retained within the uterine cavity by a contraction of the lower uterine segment and a closing down of the cervix.

Early vaginal examination will occasionally reveal a completely separated placenta partly presenting through the cervical os and easily removable by the examining finger. The few instances in which this has occurred have not been included in the tabulation of retained placentae.

In the entire series of 1,600 cases, retained placentae requiring manual removal occurred in 20 cases (table 2), an incidence of 1.2 per cent. Further analysis reveals the fact that in 2 cases immediate manual removal was performed following version for placenta praevia since the placenta was damaged during the course of the delivery, and in 2 other instances the placenta was completely separated but required manual removal because of closing down of the cervix. This leaves 16 cases of retained adherent placentae or 1 per cent.

TECHNIC OF MANUAL REMOVAL OF THE PLACENTA

The field is prepared and redraped. Ether anesthesia is necessary to produce sufficient relaxation of the uterus to allow entry of the hand. One frequently encounters a constriction at the junction of the lower with the upper uterine segment. It is necessary to dilate the cervix manually by shaping the hand into the form of a cone and gradually forcing it past the site of the constriction. While the procedure is slow and tiring to the hand, separation of the adherent placenta is not difficult and does not produce bleeding.

In no instance was more than a small portion of the placenta adherent to the uterine wall.

The most striking observation was the fact that in this series of 20 cases only 1 showed a morbid postpartum course, and this was a case at the beginning of our series in which 2 hours and 50 minutes elapsed before manual removal.

CAESAREAN SECTION

The routine use of 1 c.c. of Basergin given intravenously immediately after the delivery of the child, followed by 1 c.c. of Neo-Gynergen intramuscularly after the delivery of the placenta, was carried out in the 16 caesarean sections performed during the year.

Cyclopropane anesthesia was the routine anesthetic and there were 12 low-flap caesarean sections with transverse incision in the uterus and 4 classical caesarean sections in the series.

One was impressed at the operating table with the manner in which the uterus maintained its tonicity after the initial contraction which usually occurred within 1½ minutes. After the first contraction it never seemed to relax.

MATERNAL MORTALITY

Of the 6 maternal deaths occurring during the year, there was only 1 death from hemorrhage, which occurred in the case of a patient with accidental separation of the placenta who was moribund and died within a few minutes after admission.

COMPLICATIONS

In 2 undiagnosed cases of twin pregnancy, intravenous Basergin was given immediately after the birth of the first baby.

Case 1. M. W., Para 0, aged 25 years, was admitted April 29, 1938. Spontaneous delivery of the first twin occurred after median episiotomy at 9:15 a.m. Basergin, 1 c.c., was given intravenously before the uterus was carefully palpated. The second twin was then discovered and under gas-oxygen-ether anesthesia was delivered at 9:20 a.m. by version and breech extraction.

Case 2. C. M., Para 1, aged 25 years, was admitted September 15, 1938. Spontaneous delivery with vertex presentation of the first twin occurred at 6:57 a.m., following which intravenous Basergin was given. The placenta of this twin was immediately expressed. Vaginal examination disclosed the second twin in R.O.P. position, the head being engaged. The patient was allowed to deliver spontaneously at 7:35 a.m. with the fetus in the occipitoposterior position. The baby was cyanotic, and although the heart beat for a considerable time, the baby could not be resuscitated.

These 2 cases should serve to emphasize the importance of palpation of the abdomen before the injection of Basergin. In 1 case prompt and efficient action accomplished the delivery without effect on the child. In the other the stillbirth should be directly attributed to delay in extracting the child.

THE PUERPERIUM

Repair of an episiotomy wound or a laceration is not performed until after the delivery of the placenta. Massage or holding of the fundus is not necessary although frequent inspection and palpation are practiced. There has been no instance of serious delayed hemorrhage and in no case has intrauterine packing been employed.

In only rare instances has a second injection of Basergin been required. During the repair, the use of a vaginal pack is unnecessary. The uterus maintains its tone, and bleeding from the uterine cavity is negligible. Pituitrin has not been given in any case and we concur in the opinion expressed by Ralph G. Smith in the Report of the Council on Pharmacy and Chemistry[4]: "If necessary it (ergonovine) may be safely used in the third stage of labor in doses of approximately 0.25 mg. by injection or by mouth, as indicated by several investigations involving this procedure.[2, 5] The usual but not invariable result has been rapid placental separation and expulsion with minimal bleeding."

During the first 24 hours post partum, 1 Neo-Gynergen tablet is given every 6 hours.

A follow-up of 233 cases to determine the duration of vaginal bleeding (based on the persistence of color in the discharge) gave the shortest duration as 9 days and the longest as 47 days, with an average of 24.8 days.

In an experiment with snake venom we[6] found in a series of 50 cases (controls) that the interval varied from 19 days to 49 days, with an average of 30.46 days.

CONCLUSIONS

1. The intravenous use of Basergin in the third stage of labor is a safe procedure, as demonstrated by its use in a series of 1,617 cases.
2. Based on a total measured blood loss of 500 c.c., the incidence of postpartum hemorrhage in the 637 cases was 2.66 per cent, and for a blood loss of 600 c.c. it was 1.73 per cent.
3. The average length of the third stage of labor in the entire series was 2.3 minutes.
4. Incidence of manual removal of the placenta was 1.2 per cent.

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HEARING TESTS IN INFANCY AND EARLY CHILDHOOD

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All experts specializing in the teaching of deaf and hard-of-hearing children are now laying great stress on the importance of the early detection of their hearing defects in order to begin their education and training as early as possible.

Not only are there many obstacles and difficulties to be overcome in our effort not to neglect the impressionable years of early childhood, but because of the close connection between the faculty of hearing and the faculty of speech, early beginning of instruction is essential to the preservation of correct speech. Special schools and classes for the hearing handicapped are now equipped with modern hearing aids. Intelligently employed they are naturally of great value in speech training. The same is true as regards lip-reading. Full success in this accomplishment is best obtained by a comparison of the movement of the lip with the sound and is therefore greatly facilitated by appropriate amplification, which is available in the special schools.

In view of these facts one would think that hearing tests would naturally center upon children of the earliest age. But this is by no means the case. Although there has been of late in all parts of the country a great movement for the examination of the hearing of school children, which in some states is even made compulsory by law, little or nothing has been done in regard to such examinations of children of an earlier age, those of the preschool age, when it is most important. The tests prescribed for the examination of school children are not suitable for those of the preschool age; indeed, from all accounts neither are they suitable for school children in the primary grades. It is a remarkable fact that the age factor has entered but little into the calculations of those who have devised hearing tests. If one looks into the textbooks he will find rigid formulas set forth as though equally applicable to persons of all ages. As a matter of fact, the hearing function is by no means the same for all ages, but there are wide divergencies such as one does not find in any of the other special senses. We are familiar with the regular decline of hearing power with old age. This is not a mere decline in degree, but is an essential change in character.

In early adult life the hearing pitch range extends from 20 to 20,000 vibrations per second. After the age of 40 there is a noticeable lowering of the upper limit, which progresses until by the age of 80 it has dropped to as low as 10,000 or even 8,000 per second. An audiogram therefore in the later decades is something very different from that of youth and early adult life. In fact, an audiogram which is perfectly normal for old age would in the case of the youth be regarded as evidence of serious disease of the hearing organ. It is therefore evident that for the later decades of life an entirely different standard is to be employed.

At the low end of the age scale the difference is even more striking. Indeed, in the first weeks, or perhaps months, of life there is no hearing at all. The newborn child is essentially stone-deaf. It is not certainly known at exactly what age the sense begins to function, but it is known that it is not until about the end of the second month that an infant gives evidence of its existence by turning its head toward a source of sound. While hearing tests for later ages have for their purpose the determination of the amount and quality of the hearing, it is evident that for infants they have necessarily a much more limited purpose, namely, that of merely determining whether or not hearing exists at all. This is naturally a question which gives great anxiety to the parents and one that means much for the future of the child. It is not by any means a simple problem, and there have been many instances when it has remained unresolved far beyond the time such a discovery should easily have been made. Mothers even in the case of considerable delay in the development of speech are reluctant to believe that their offsprings are deaf-mutes. Infants though completely deaf will coo and give utterance to meaningless sounds generally known as babbling. This the mother will interpret as positive evidence that deaf-mutism does not exist.

How shall we determine the real situation? Are there any reliable tests in such cases? In suspected deafness, the examination should include (1) a history of the case, (2) a consideration of the behavior of the child, and (3) the employment of special tests. To begin with, in a case of suspected inherited condition, one should inquire into the history of deaf-mutism in the family; in suspected acquired deafness, one would lay stress on a history of an illness such as one indicating cerebrospinal meningitis.

There are certain aspects of behavior that strongly indicate absence of hearing. The most important is the use of gestures in place of speech. The deaf child never appears to be closely attentive to anyone speaking, and it has been observed that his attention wanders quickly from person to person. At about the tenth to twelfth month, the babble of a normal child begins to change, and syllable sounds are uttered showing the evident influence of hearing speech. When this development is missing suspicion should be aroused. Between the second or third year there should be unmistakable efforts at speech. Its absence by this time ought to be interpreted as strong evidence of deafness rather than delayed development.

The deaf-mute child nearly always exhibits certain abnormalities of disposition. They probably arise from frustration in his efforts to make his wants known. He is generally peevish, self-willed and given to outbreaks known as tantrums. There is also often noticed a difference in gait. Instead of even and rhythmical, it is often of shuffling character with a tendency to drag the feet. This is perhaps to be explained by the absence of the guiding influence of the sound of the footsteps against the floor in walking.

As to direct tests designed to ascertain if hearing is present, the most common one is the use of a bell or whistle or other sound behind the back, observing whether the child turns its head or otherwise indicates its perception. Certain precautions must be carefully observed in making such tests. Clapping the hands, for instance, will produce a puff of air which may be felt. A reaction to this must not be mistaken for hearing. Likewise a false conclusion might be drawn from the use of sound attended by strong vibration. A child that hears nothing will react to such sounds as that from heavy footsteps or slamming the door. A good test is the use of two watches, one with a loud tick, the other quiet. If when held simultaneously, in alternating fashion at the sides of the head, the child regularly turns its head toward the side of the going watch, it is a good evidence of hearing. If uncertainty persists, resort may be had to the employment of automatic toys such as jumping animals. One first practices initiating the action by gestures before the child's eyes. Later he substitutes sounds as signals for action. A little patient observation will soon make possible a definite conclusion. In addition to tests intended to excite voluntary reactions on the part of the child, one may next employ tests aimed to excite involuntary reaction or reflexes. Tests of this kind are sometimes utilized for the detection of simulated deafness in an adult. They depend upon the fact that a loud unexpected sound may produce certain eye reflexes, such as the spasmodic closing of the eyelids or winking or slow dilation of the pupils. The surprise element is essential in such tests. Also, as in the case of the voluntary reactions, it is necessary to exclude the effect of vision and touch.

Just above the age of infancy we come to the age level of early life that marks the beginning of what is generally referred to as the preschool age. It is roughly a three-year period, which may be said to begin at about $2\frac{1}{2}$ or 3 years and extend to about $5\frac{1}{2}$ or 6 years, at which time the majority of children enter the first of the primary grades of the regular graded school system. This age zone is the one above all others in which information as to the hearing function is of paramount importance, and yet it is the one during which relatively little attention is given to the subject. The existence of possible hearing difficulty is of particular importance in the preschool age because this is the time when plans are being made and a decision has to be reached with regard to school arrangements. It is most unfortunate if a child enters school with an overlooked defect of hearing. All sorts of difficulties ensue which have a lasting influence upon his character and future life. A right beginning of his school career is essential. Formerly the special education of a seriously deafened child was generally delayed until about the age of 6 or 8 years or later. Now all authorities insist that the special education should begin much earlier, at about 3 or 4 years, if best results are to be obtained.

How shall we go about making a hearing test for this important period of the child's life? As a matter of fact, the testing of the hearing of the preschool child is a problem in itself, quite distinct from that of either the earlier or the later age. In infancy our sole concern was to discover whether the hearing was affected at all or not, but as soon as the child can speak for himself we naturally aim to go a step farther and to ascertain not merely whether the hearing be affected, but also to what extent it is affected.

We cannot use the same tests as are used for older children. The tests suitable for school children are not at all suitable for the preschool age. For the examination of hearing among school children a definite procedure has been formulated, which is now almost universally accepted and practiced throughout the country.

Two kinds of audiometers are used, (1) the 4A or phonograph audiometer, and (2) the 2A or pitch audiometer. The 4A is used for group testing. As many as 40 children can be examined at a time, and a certain standard being agreed upon, the practically normal cases are screened out from those who according to the standard have defective hearing. The latter then are submitted to a special individual test by the employment of the 2A, the pitch type of audiometer. Both of these methods of examination are inapplicable to the child of preschool period.

In the phonograph test, the children are supplied with sheets of paper marked off in columns and subdivisions, and as the phonograph record reproduces a series of spoken three-figure numbers at a fixed speed, they must write these numbers in the specified spaces as they hear them. The test lasts on an average of 20 minutes, during which time the children must continue to hear and write with concentrated attention. It is in fact a sort of written examination, which of course is out of the question for children of the preschool age. Even according to the best opinions a test of this kind is unsatisfactory for children of the primary school grades. It is difficult for these little children to maintain sufficient sustained attention to carry through. They are fidgety, listless and careless, and the results are unsafe guides as a measure of the hearing capacity.

As regards the use of the 2A or pitch audiometer, the same criticism applies, but with greater force. In this test a series of tones, usually 6 or 8, are used, and the hearing is tested for each, one after another, so that a curve or so-called audiogram can be made, which gives the degree of hearing for tones of varying pitch. The result is based upon the minimal hearing for each tone, and this requires a discrimination often difficult for adults and not at all to be expected in these very young children.

In the first large statistical report made in 1927, based on the examination of 250,000 school children in different parts of the country, it was claimed that the hearing was off as much as 8 to 12 per cent. In a later report based on the examination of 800,000 children of New York State, the number of those with hearing handicap was given as between 3 and 4 per cent. Recently 30,000 were examined by the same system in the schools of London, and the percentage of those with defects was less than 1 per cent.

I am of the opinion that these discrepancies are in a measure due to the utter unreliability of examinations in children too young. Tests made for children of the preschool age must not require sustained attention and must not produce fatigue. The most important condition is that they shall be of very short duration. It is best that they be so designed as to excite interest and be amusing. I have found that the ordinary pocket watch makes an excellent instrument for this purpose. The watch tick will always amuse and arrest attention in these very young children. Dr. DeSaussure, Medical Inspector of Schools in the District of Columbia, tells me that he has found it the most satisfactory method of examining the hearing in the primary grade. He uses always the same loud ticking watch, for which he has established a normal for the distance in which it should be heard in the room in which he makes the test.

Dr. Sperry of New Haven, a leading authority on this subject, and a former president of the American Association for the Hard of Hearing, has designed for hearing test purposes a special watch that has a fixed decibel rating. This is to enable the examiner to estimate the decibel loss in hearing according to the distance heard under conditions of standard quietness. Why not make an electrically produced watch-tick sound, so that the intensity of the tick can be lowered or raised at will in measurable degrees just as is done for the continuous sounds of the conventional audiometer?

As already stated, the minimal threshold sensations are very elusive. When a continuous sound slowly fades, it is sometimes exceedingly difficult to distinguish between hearing and a memory image of sound. It is possible that the phenomenon of fatigue comes into play. We believe that the interrupted sound as of a watch tick is less fatiguing in the process of going out and more readily arrests attention in the process of coming into consciousness.

When only a single-toned instrument is used the tone selected is a matter of considerable importance. It should be neither a very high nor a very low note, because extremes of the scale are of comparatively less practical value to hearing.

Speech frequencies are comprised generally within a range extending from about 300 to 3,000 cycles, but if we should select one particular frequency as most important for general conversation purposes, it would be in the neighborhood of the 1,000 cycle, the reason being that this is about the zone of most consonant sounds which are so essential to good speech perception. Accordingly I suggest a watch-tick sound at about the note C3 (1,024 cycles) as one which justly might be considered as representative of useful hearing. Such an electrically controlled watch used for hearing tests would retain the most important features of the conventional audiometer, namely, measurement of hearing by variation of the intensity of the sound, rather than by variation of the distance as was done in the old methods. Another feature that ought to be retained is the use of the ear-phone since in this way much extraneous noise is eliminated in the operation of testing.

Limiting the test to a single tone has a certain advantage over tests made with the multitone audiometer. It is that the result may be set down directly in simple percentage values. In tests in which a series of different tones is employed the hearing loss may differ with each separate one. This makes it impractical to give the hearing loss in simple percentage terms but requires rather a complicated chart generally known as the audiogram. Information of this type is indeed of great value to the otologist, but it has little meaning for the average layman. At any rate, in the case of the very young children the multitone hearing test is inapplicable. We are lucky if in the case of these little ones we can secure a reliable approximate estimate of the general hearing acuity. Simple tests are best. Every complication only increases the liability of error.

Summary and Conclusions

Special education of the deaf or partially deaf should begin at a very early age, at the period when the child begins or ought to begin to talk. Imperfect hearing results in imperfect speech, which will become a fixed habit of life unless prevented or corrected by early training.

Group hearing aids as employed in up-to-date special schools and classes for the deaf are of great value in teaching correct method of speech and lip reading.

Early education is also of importance for children with less severe defects who plan to enter ordinary schools. They will thus receive at once necessary special attention, including lip reading, and will avoid being labelled as merely stupid pupils. The earliest possible recognition of a hearing handicap is therefore of paramount importance.

The presence of deafness in infancy is sometimes overlooked. Detection is made possible by a combination of the observation of the behavior of the child and by the employment of tests for voluntary and for involuntary reactions.

Examination for the presence of hearing defect is no less important for a child preparing to enter school as for children in school, but the former class has in this respect been generally ignored.

Furthermore, the tests in general use for the examination of school children are wholly unsuitable for children of the preschool age. They are much too complicated and confusing, require too great concentration of attention, and are too fatiguing. They are for the same reasons generally unsatisfactory also for children in the primary grades.

For very young children a simple test by means of an electrically controlled watch-tick sound, calibrated for percentage reading, is suggested. The frequency of the test tone selected should be in the neighborhood of 1,000 cycles, the zone of consonant sounds most important for speech perception. A test of this description would be fairly representative of the hearing in general and it would be a very practical test in early childhood.

Report Synthetic Substitute for the Female Sex Hormone. A synthetic substitute for the female sex hormone, known as stilbestrol, which can be taken by mouth, is reported in *The Journal of the American Medical Association* for December 23, 1939, together with a warning by the Association's Council on Pharmacy and Chemistry that "its use by the general medical profession should not be undertaken until further studies have led to a better understanding of the proper functions of such drugs."

Commenting on the development of sex hormone treatment during the past decade, especially estrogenic or female sex hormone substances, *The Journal* in an editorial says:

"The idea that estrogens are related in their activity only to sex organs should be abandoned. Other tissues of the body may react in an undesirable manner when the doses are excessive and over too long a period. This point should be firmly established, since it appears likely that in the future the medical profession may be importuned to prescribe to patients large doses of high potency estrogens, such as stilbestrol, because of the ease of administration of these preparations."

In addition to being used in the treatment of certain disorders of women, the female sex hormone has been beneficial in the treatment of some cases of leukoplakia, a disease affecting the mucous membrane of the cheeks, the gums or the tongue, in the latter cases sometimes being called geographic tongue.

Because evidence has appeared which indicates that toxic or poisonous reactions, such as nausea and vomiting, are associated with the use of stilbestrol, the Council states that:

"Because the product is so potent and because the possibility of harm must be recognized, the Council is of the opinion that it should not be recognized for general use or for inclusion in New and Nonofficial Remedies at the present time."

Reports by three groups of investigators on use of the drug, one by Ephraim Shorr, M.D., Frank H. Robinson, M.D., and George N. Papanicolaou, M.D., New York; another by C. L. Buxton, M.D., and Earl T. Engle, Ph.D., New York, and one by Cyril M. MacBryde, M.D., Harold Freedman, M.D., and Ellen Loeffel, M.D., St. Louis, are published in *The Journal* with the authority of the Council. Commenting on these reports, the Council says that "considerable more experimentation is necessary. It is well to await the outcome of further investigations which are being made in institutions which have facilities for proper experimentation and observation."

DIAGNOSTIC STUDY OF THE PATIENT WITH CORONARY ARTERY DISEASE*

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Coronary artery disease is one of the most important, as well as one of the most enigmatic diseases from a diagnostic standpoint. Its incidence increases with age, and although occurring in all adults it is present in sufficiently advanced form only in certain individuals to be of great clinical importance. The lesions of coronary artery disease may be accompanied by many or only a very few symptoms. Their speed of development varies with the numbers and kinds of etiologic factors in operation. They may appear in usual or unusual locations within the arteries of the heart. They occur in arteries with lumina so small that relatively insignificant changes in thickness of the arterial wall produce marked changes in size of the arterial lumen. Finally, reflex response to stimuli arising outside the cardiovascular system may further change the size of the lumen, the extent of this change depending upon the degree of disease of the artery.

During the period when these changes are taking place, a period which undoubtedly precedes the occurrence of actual occlusion by many years, the patient's clinical status is precarious, the more so the younger he is; he is constantly liable to ventricular fibrillation. Although from the statistical standpoint the number of deaths in young persons is not especially impressive, all deaths are a matter for concern in persons otherwise so healthy. Usually this type of accident strikes a person in the prime of life, one who is often the sole support of a family and who is forced to work at maximum capacity. It is necessary for him to be relieved of discomfort at the same time that he receives instructions concerning important changes in the routine which of necessity he must continue to follow. For these reasons, in this paper emphasis is placed upon the means available for, and the results of their utilization in the diagnosis of coronary artery disease in its early stages.

The information upon which the knowledge of the pathologic process in coronary artery disease is based must be obtained at such early stages during the progress of the disease that it is necessary to extrapolate backward, so to speak, the data obtained from the hearts of patients who have died as a result of coronary artery disease. Despite this handicap recent studies of autopsy material have been of utmost importance in indicating what occurs in the early stages of coronary artery disease. The methods most recently used in the study of this material have been injections of the vascular bed of the heart. On the one hand, this has consisted in gross injections of the coronary arteries with radiopaque substances, followed by roentgenograms to show the vascular pattern. On the other hand, india ink has been injected into the vasa vasorum of the coronary arteries and the segment of artery selected for study has been cleared subsequently. The vessels also have been studied after clearing alone with subsequent preparation of histologic sections.

Recent work by Schlesinger,[1] who used the former technic of radiopaque injections and X-ray photographs, reveals clearly not only old occlusions and sites of near occlusion, but also in hearts with occluded coronary arteries a rich anastomotic circulation of capillaries. This latter condition, it is to be emphasized, is present only in hearts with coronary arteries which have been occluded previously. No anastomoses could be demonstrated in normal hearts. When present, such anastomoses originated from the left coronary artery in the majority of instances and from the right coronary artery only occasionally. In a small percentage of hearts anastomoses were present without occlusion of the arteries; spasm of the artery is the most likely explanation of this state of affairs.

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* Read before the Louis Mackall Medical Society, November 16, 1939.

Working with a different series of hearts and using a technic of injection of the vasa vasorum with india ink and of clearing the vessel walls, Winternitz[2] and his associates obtained considerable information concerning the condition of the coronary arteries. With increasing age as well as an increasing amount of coronary artery disease there is an increase in the number of vasa vasorum of the coronary arteries with varying amounts of hemorrhage into the arterial walls. Their studies demonstrate very clearly the important role played by hemorrhage into the vessel wall and emphasize the multiplicity of etiologic factors, since innumerable factors such as trauma, vitamin deficiencies, infection and hemorrhagic diatheses all may give rise to this hemorrhagic type of lesion.

The relation of biochemical changes to coronary artery disease is as yet obscure. The facts, however, that cholesterin crystals are present in the lesions, that hypercholesterolemia occurs in a more than normal percentage of patients with coronary artery disease, that coronary artery disease is present to a marked degree in diabetics in whom hypercholesterolemia is constant, and that hypercholesterolemia exists in a certain proportion of the population generally, all make disturbances in metabolism of this substance one of the important factors in this disease.

Confronted with a young adult, especially a male over 30 years of age, in every instance of which there is greater or less likelihood of the changes just discussed being responsible for the symptoms, what are the criteria for evaluating the condition of the coronary artery circulation? Pain or discomfort in the epigastrium or behind the sternum presenting almost any of the usual or unusual characteristics of pain in this location may be of coronary artery origin. "Gas pains," "discomfort after meals," "feeling of pressure behind the sternum," and many other phrases have been used at one time or another to describe the discomfort. If upon completion of the usual detailed medical history and physical examination, there is no further evidence of organic disease of the stomach, intestines, gallbladder, liver, spleen or kidneys, then one is confronted with the necessity of studying the coronary circulation in detail.

In these circumstances, the electrocardiogram is by far the most reliable indicator of coronary artery disease. It must be understood, however, that if during electrocardiographic examination only those major changes incident to infarction of large portions of the myocardium are sought for (fig. 1), then the information obtained will be disappointing. Instead, if such changes as low voltage of the QRS complexes, and changes in the various chest leads are sought for (fig. 2), then information of considerable value will be obtained in these early stages.

In order to better orient those in the group who work with electrocardiograms infrequently, a brief review of the principles of electrocardiography recalls that there are three major periods during each heart beat when electrical currents are produced. These electrical currents are recorded as waves in the electrocardiogram. The P wave indicates the electrical current produced during auricular contraction or systole, the R wave or QRS complex (the choice of name depending upon the configuration) represents the electrical current produced during ventricular contraction or systole, while the T wave represents the electric current produced during ventricular relaxation of diastole. These currents have very small voltages, that of the P and T waves being approximately 2 to 3 thousandths of a volt, and that of the R wave being 8 to 10 thousandths of a volt in normal persons. What makes study of electrocardiograms so complicated is the fact that all of the observations are empirical and the form of the waves, direction of their convexity, durations of the intervals between waves, direction of the major deflections and the height of the various segments above the base line are all variable, not only for the three standard arm-leg leads but also for the more recently introduced thoracic or precordial leads. When one considers that these variations in turn are influenced by the various pathologic factors constantly in operation, one finds the answer to many questions concerning the present limits of electrocardiographic interpretation.

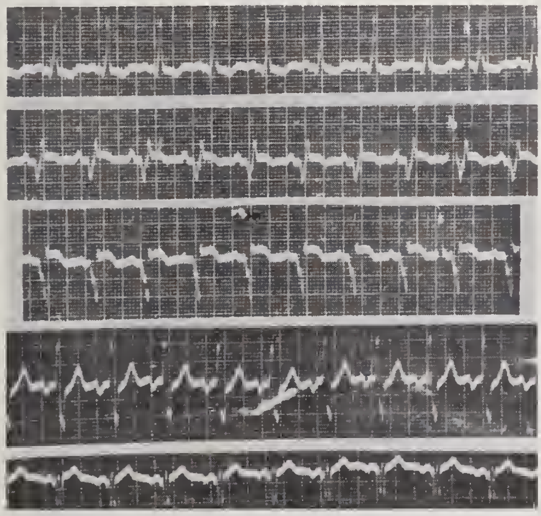

Fig. 1. Early elevation of the RT segment in leads 2 and 3 following infarction of the posterior wall of the heart.

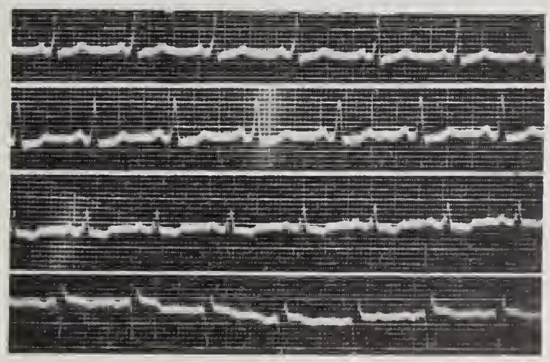

Fig. 3. Elevated RT segments in the apical chest lead of a 38-year-old white man.

With regard to the appearance of these variables in the electrocardiograms of coronary artery disease, Feil[3] has reported a series of cases in which electrocardiograms were obtained just prior to (during the period of "preliminary pain") and after attacks of coronary occlusion. Although Feil interprets as normal the electrocardiograms of 2 of 5 patients whose records were taken during this preliminary pain, reproductions of all these electrocardiograms in his paper show deviations from normal. The electrocardiogram of his case 3, which is described as "normal," shows the following deviations: heightened RT_3 and RT_4 takeoffs and a deep Q wave in lead 3, changes which for the most part are exaggerated following the "severe" precordial pain, namely, markedly heightened RT_3 and RT_4 takeoffs and a depressed RT_1 and upwright T_4. His case 8 shows a previously inverted T_3, upright after the "preliminary pain," heightened RT_4 takeoff with diphasic T_4 and the presence of a Q wave in lead 3. After the severe pain of the occlusion, RT_2 and RT_3

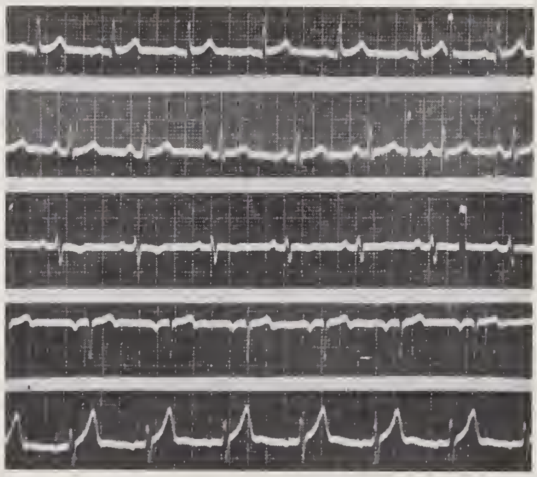

Fig. 2. Slightly elevated RT segments in leads 1 and 2 and excessively high T waves in the apical chest lead.

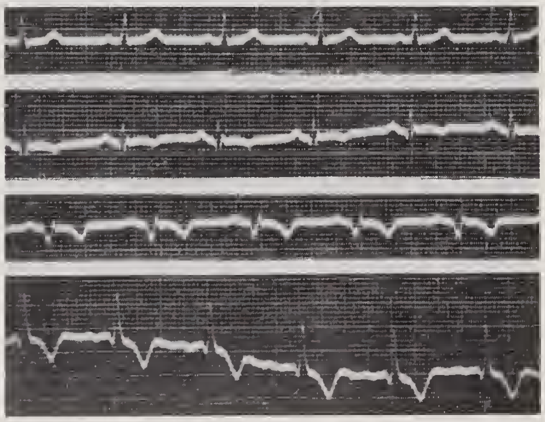

Fig. 4. Inversion of the T waves in leads 2 and 3 in a case of infarction of the posterior wall of the heart (56-year-old white man).

were depressed, RT_4 was markedly depressed and T_4 was inverted.

In the belief that a few cases with serial electrocardiograms show more than a large series of cases with only one electrocardiogram each, the following cases are presented. They are believed to illustrate well the fact that the majority of the electrocardiographic changes demonstrable in the face of suspected coronary artery disease are significant. If the electrocardiographic record is technically acceptable, then all the changes, even those considered by some to be "minor," can be evaluated accurately. It is important to note, however, that in the face of suspected coronary artery disease an electrocardiographic examination which reveals no abnormality is only of secondary importance. If no electrocardiographic changes appear on repeated electrocardiographic examinations during the period of care of the patient, the duration of which period is based on the clinical diagnosis, then the physician can feel certain that the cardiac disturbance even though very important was of small magnitude anatomically.

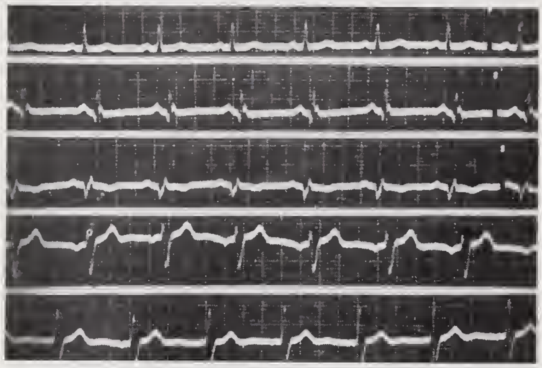

FIG. 5. Isoelectric T waves in lead 2 and slightly inverted T waves in lead 3 in the same patient as in figure 4 a year later.

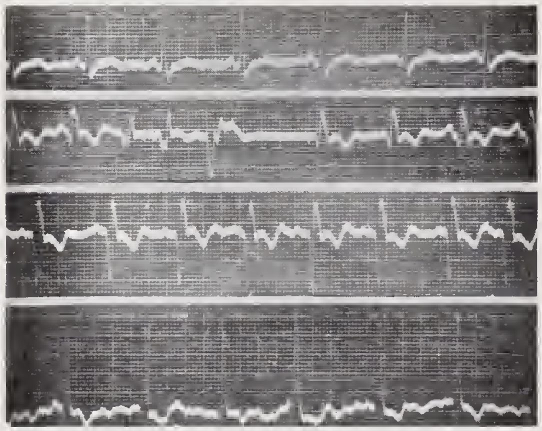

FIG. 7. Electrocardiogram of same patient as in figure 6, 4 months later.

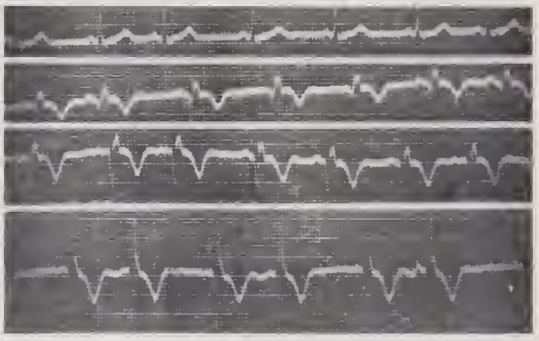

FIG. 6. Marked inversion of the T waves in leads 2 and 3 in another 56-year-old white man.

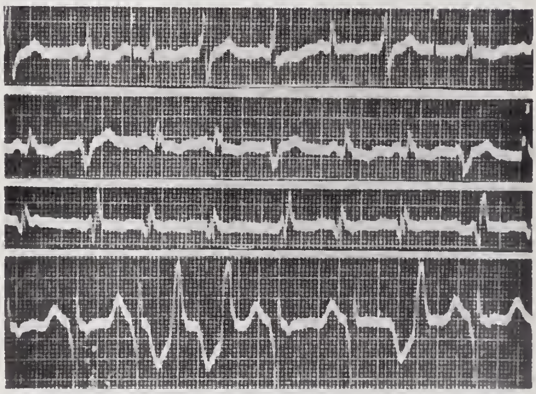

FIG. 8. Electrocardiogram of same patient as in figure 6, 1 year later, just prior to patient's death.

The first example is the case of L. A. H., a 38-year-old white male, whose electrocardiogram at the time of epigastric distress, precordial pain, and excessive amounts of "gas" showed the following changes (fig. 3). The QRS duration in lead 2 was of 0.08 sec. duration, the T wave in lead 3 was inverted, and there was marked heightening of the RT takeoff in the chest lead. After 2 weeks of complete rest in bed the patient's symptoms disappeared; but 1 year later, nitroglycerine and xanthine derivatives having been used meanwhile, the patient was seized suddenly with severe pain beneath the sternum and died within several hours.

Serial electrocardiograms in a second case, R. E. C., a 56-year-old white male, show the changes resulting from a gradually developing occlusion. In January 1938 an attack of severe substernal pain of 36 hours' duration, unaccompanied by any of the other usual symptoms in the classic type of case, was relieved but not abolished by nitroglycerine and morphine by mouth. Electrocardiographic study at the time of the pain showed little abnormality, but within 6 weeks electrocardiographic examination (fig. 4) showed the classic evidence of posterior coronary artery occlusion. Subsequent electrocardiographic examinations have shown a gradual return of the T waves in the second and third leads to an isoelectric level. In fact, examination of the most recent electrocardiogram (fig. 5) shows no gross T wave changes.

Another example of changes in T wave configuration occurred in the case of J. B. He was also 56 years old at the time of his first occlusion, and electrocardiographic examination in June 1937 (fig. 6) showed marked inversion of the T waves in leads 2 and 3. Four months later (fig. 7), the marked inversion of the T waves had decreased and they had assumed a diphasic character. Shortly before the patient's death 1 year later (fig. 8), electrocardiographic examination revealed an almost flat T wave in lead 3 and only a slight inversion of the T wave in lead 2.

Despite the fact that such examples might be multiplied many times, the conclusions remain the same, namely, that electrocardiographic abnormalities when present in this type of case parallel the intracardiac pathologic changes, but are demonstrated with finality regardless of age only in serial electrocardiographic examinations.

Changes in configuration of the ventricular or QRS complex, although producing a widely variable series of patterns and although perhaps available for diagnostic use later, at present are not specific unless the configuration is that found in bundle branch block.

Roentgenkymography[4] likewise is still in the stage in which results are indefinite in so far as correlation of the results of roentgenkymographic examination with the pathologic condition of the heart is concerned. From the study of the ventricular waves of the roentgenkymograph it is possible to obtain considerable information as to how the heart does its work. To what extent this is disturbed by coronary artery disease remains for future study.

Although Starr[5] and his colleagues had the opportunity during studies on cardiac output to determine the amount of work done by the heart during periods of pain of coronary artery origin, these studies likewise at the moment contribute little information to the study of coronary artery disease in its early stages.

SUMMARY

The diagnostic study of the patient with coronary artery disease involves many variables. These are the numbers of etiologic factors, the speed of development of the lesions, the locations of the lesions, the reflex responses of the coronary arteries to outside influences, and the relations of the lesions to the clinical symptoms. The reparative process which occurs simultaneously with the lesions consists in the appearance of anastomotic vessels in the myocardium. Clinical evidence of the presence of these lesions is provided chiefly by electrocardiographic study. These electrocardiographic changes are small in magnitude in the early stages of coronary artery disease, consisting primarily of transitory changes in the RT intervals and in the T waves, in both the standard and precordial leads. Serial electrocardiograms at appropriate intervals permit both the recognition and accurate evaluation of these abnormal transitory deviations.

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(Continued on page 36)

SPONTANEOUS RUPTURE OF THE URINARY BLADDER*

REPORT OF A CASE

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Hippocrates in his writings stated that a severe wound of the bladder was deadly. Galen modified this idea, stating that the condition was dangerous but not necessarily fatal. Otis,[1] Keen,[2] and Ashurst[3] suggested means of treatment but it was not until 1848 that the English surgeon Syme[4] was successful with surgery for intraperitoneal rupture. Harrison[5] wrote the first extensive review of vesical ruptures. He stated, "The urinary bladder may rupture without external injury but merely from violent exertion and repeated straining to evacuate the bladder when overdistended in consequence of some obstruction in the flow of urine." Rivington[6] reported 7 cases of spontaneous rupture and stated that the bladder cannot rupture from distention alone but must be accompanied by changes in the wall. In some cases, however, no changes were found in the vesical wall at the point of rupture or elsewhere. This contention prompted the use of a more fitting term than "spontaneous." The terms "idiopathic" and "pathologic" have been used. According to Stone,[7] the term "spontaneous rupture" should be applied to those cases resulting from pathologic changes in the wall of the bladder or obstructive lesions at the bladder neck or in the urethra, irrespective of the presence or absence of pathologic changes in the bladder. Up to 1931 40 such cases had been reported in the literature, to which he added 2. It seems, therefore, that rupture of the bladder without external violence is relatively rare.

The etiology of spontaneous rupture of the bladder may depend upon some pathologic change in the bladder wall as is illustrated by the case to be described, but the obstruction to the flow of urine with resultant bladder distention is said by Sisk and Wear[8] to be the chief causative factor. Cases of rupture following distention in the alcoholic are sometimes reported as being spontaneous, but it is more commonly believed that these cases come under either frank trauma from without or because of sudden contraction of the anterior abdominal muscles. Rupture of the bladder has occurred during labor, during straining at stool, and when heavy weights were being lifted. Extension of growths from adjacent organs, such as the rectum and uterus, to the vesical wall makes the bladder vulnerable to rupture. Unrelieved urethral stricture, calculi, or phimosis are also conditioning factors. Lesions of the bladder wall which predispose to rupture are inflammation, tuberculosis, ulceration, tumors and degeneration, such as the hyalin type found in elderly persons. King[1] reported a case of rupture occurring in a fetus with an imperforate urethra. Very few cases of rupture have been reported in association with hypertrophy of the prostate.

Spontaneous rupture is divided into two types having quite different symptoms. The first and more frequent, the intraperitoneal, is usually caused by a rent in the posterosuperior surface of the bladder wall. This is probably due to the arrangement of the musculature at this point and to the fact that the only covering is peritoneum, whereas elsewhere it has muscle and bone to encircle it. This first class is the more serious because of the extravasation of urine in the abdominal cavity, while in the extraperitoneal rupture the urine is disseminated along the fascial spaces and is not, therefore, so quickly fatal. In cases of extravasation of uninfected urine the cause of death has long been debated. Peritonitis has often been blamed, but Bartels,[9] Tuffier, Strauss and Rizzo stated that the true cause is acute uremia. Pezcoller,[10] after observing a case of aseptic extravasation following rupture of the bladder, conducted experiments on dogs. At autopsy there was no inflammation of the peritoneum except in some cases where there was congestion and hyperemia of the subserous tissue near the perforation. However, degenerative changes in the liver and spleen were observed microscopically. On the basis of his findings he concluded that death occurred because of acute uremia due to an increased absorption from the peritoneum with increasing azotemia and a decreased urinary secretion on the part of kidneys seriously injured by the uremic components which entered into the circulation by way of absorption. With extravasation of urine, although aseptic, into the tissues of the groin, as occurs in lacerations of the anterior or lateral wall, necrosis and infection quickly follow with resultant cellulitis.

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* Reported by permission of, and with helpful suggestions from Dr. Frederick A. Reuter, Chief of the Urologic Service, George Washington University Hospital.

In cases injudiciously cystoscoped or catheterized and in those in which the urine is originally infected, there results in the case of intraperitoneal rupture, grave peritonitis, usually with early death.

It clearly follows, therefore, that the diagnosis of ruptured bladder should be made without delay so that the symptom complex of uremia or an extensive cellulitis may be avoided.

The symptoms and diagnosis depend on whether the rupture be intra- or extraperitoneal. A history of previous urinary difficulty, of stricture, stones or bladder growths is of significance in both.

With intraperitoneal rupture early diagnosis is more urgent and yet more difficult. Sudden severe abdominal pain with a feeling of giving away, urgency, and difficulty in voiding, together with the passage of small amounts of blood per urethra should make one consider a tear of the vesical wall. The initial shock in many instances passes into a delusive calm, when the patient, thinking himself better, does not consult his doctor until abdominal pain returns with great severity and he feels very ill. At this time one finds a patient in shock. The abdomen may be distended with fullness in the lower quadrants. With intraperitoneal hemorrhage, the sign described by Cullen and just applied to these cases by Peterson may be seen as a bluish discoloration about the umbilicus. The abdomen is rigid and excruciatingly tender, and a fluid wave may be elicited. With the stethoscope the abdomen is found to be silent. Rectal examination may reveal only evidence of extravesical extravasation. It is readily seen that, aside from a history of previous urinary difficulty, these may be the signs of any intra-abdominal catastrophe. Therefore, other means must be employed in order to make the proper preoperative diagnosis.

The passing of a catheter is not without danger. This should not be done unless the operating room is ready for immediate use in case blood is found. Its introduction alone or with injection of sterile solutions only increases the danger of sepsis with resultant virulent peritonitis. The teaching of injecting a known quantity of solution and measuring the recovered amount is not without error, for at the time of injection a blood clot or bladder tumor may act as a veil covering over the rent in the wall, resulting in recovery of the injected amount of fluid and giving a false sense of security. Cystography, in like manner, as will be illustrated in the following case, may lead to confusion in diagnosis and therefore delay in treatment. The injected opaque substance may, because the bladder tear is temporarily covered, give a clearly outlined picture of the bladder without extravasation. When physical conditions permit, cystoscopy is the most accurate method of diagnosis. This should be done with the patient draped for operation, so that if the diagnosis is made, immediate celiotomy may be done. Vigorous bleeding, however, may prevent visualization, and a large rent may make needed distention impossible. Vaughn and Rednick[11] have introduced vesical pneumoradiography as a method of diagnosis. They advocate the injection of 50 to 100 c.c. of air into the bladder, followed by the taking of lateral roentgenograms. If the bladder is ruptured intraperitoneally, air is noted within the abdominal cavity and may be localized under the diaphragm, whereas if the rupture is extraperitoneal, perivesical infiltration of air will be demonstrated. At times the air will be found following the fascial planes. A vesical pneumogram with unbroken contour will be found with a normal bladder.

Laboratory findings are practically of no help in the diagnosis. Watchful waiting in order that the diagnosis may become clear will lead only to disaster. Early abdominal exploration is therefore the treatment of choice, instituted immediately after shock is combated.

Of the surgical treatment only one point need be stressed. This is adequate drainage. Crosbie[12] states that it is not necessary to close the defect in the bladder since drainage of the bladder and abdomen is sufficient. Usually, however, with the bladder tear located, it is quickly sutured and drainage may be instituted suprapubically, with the use not of rubber tissue, Penrose drains or the like, but of tubes of at least 3 cm. in diameter in order to allow for free flow of blood and urine from the paravesical spaces.

Early operation gives a very low mortality in both the extra- and intraperitoneal ruptures, and, as Besley[13] stated as far back as 1907, "No one condition seems better to illustrate the advances that have been made in modern surgical work than the results now obtained in the treatment of rupture of the bladder."

Report of Case

On the morning of the day of admission to the hospital, a man, aged 67 years, complained of the sudden onset of severe abdominal pain on micturition. The pain was so intense that the patient collapsed for a short time. He was seen by a physician that afternoon and gave him the impression of having a distended bladder. On catheterization, only 250 c.c. of urine was obtained. This was very cloudy, thick and mixed with blood. The patient had been under treatment for the preceding 15 years for enlarged prostate. The nature of the treatment was not known. No symptoms referable to the cardiorespiratory or gastrointestinal systems were given by the patient.

On admission,. the patient appeared to be in great pain. The blood pressure was 160/95, the pulse rate 78, the respiratory rate 22, and the temperature 100.6°F. The lung fields were clear and the heart was found moderately enlarged to the left. The abdomen was round, with venous congestion of the superficial vessels, moderate increase in muscle tonus and marked tenderness throughout, particularly in the hypogastric region. On auscultation no peristaltic sounds were heard. Upon rectal examination the sphincter tone was found to be fair and the prostate normal in size and consistency; no masses were palpable, and there was no evidence of new growths. There was moderate tenderness on the right side. The patient voided about an ounce of thick yellow urine with much shreddy material, slightly blood-tinged. With immediate catheterization 2 ounces of urine (which stopped abruptly) were obtained. At this time the leukocyte count was 21,150, with 90 per cent segmented forms, 5 per cent bands, 2 per cent juveniles, 1 per cent monocytes, and 2 per cent lymphocytes. The hemoglobin was 86 per cent, and the red blood cells numbered 4,380,000.

On the following day there was abdominal distention and rigidity with marked tenderness throughout. The blood pressure was 160/90, the pulse rate ranged from between 74 and 100, the respiratory rate between 20 and 40, and the temperature was about 100.4° F. The leukocyte remained about the same. On the third hospital day, however, the leukocyte count was 9,800 with 41 per cent bands. The urea nitrogen was 50 mg., the nonprotein nitrogen 77 mg., the creatinine 3 mg., and the chlorides 430 mg. per 100 c.c. of blood.

With the cystoscopic examination the bladder was easily distended but the capacity was found to be decreased. There was a large soft sloughing mass involving the dome and anterior wall. The trigone and ureteral orifices were not visualized, and the indigo carmine given intravenously did not appear within 45 minutes. A cystogram at this time showed intravesical displacement of the opaque media, interpreted to be due to a new growth, but no extravasation was present.

The patient quickly declined and died on the third hospital day.

At autopsy generalized purulent peritonitis was found. The bladder had ruptured in the lower anterosuperior border with an opening about 5 mm. in diameter, through which a thick, light granular substance could be expressed. Removal of the bladder was attended by further ruptures in the wall. External examination of the bladder revealed the presence of an extensive, irregular tumor, involving the superior and posterior surfaces of the organ on both sides. On section the bladder was found to contain a large amount of thick, white, semiliquid material. The wall was extensively infiltrated with an irregular papilliform tumor mass. This was easily broken in every part and on microscopic section proved to be a papillary adenocarcinoma.

CONCLUSIONS

1. The term "spontaneous bladder rupture" should be used in cases resulting from pathologic changes in the wall of the bladder or obstructive lesions at the bladder neck or in the urethra, irrespective of the presence or absence of pathologic changes in the bladder.
2. Death in cases of intraperitoneal extravasation of uninfected urine is due to uremia, and the diagnosis should be made early so that this may be avoided.
3. Of the adjunctive means used in the diagnosis of bladder rupture, vesical pneumoradiography is one of the most important, and early operation is outstanding in lowering the mortality.

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Thrombophlebitis Relieved by Injection of Anesthetic. Fifteen patients were relieved of the pain, swelling and fever, due to inflammation of and a blood clot formation in a vein of an extremity, by the injection of an anesthetizing agent into the sympathetic nerves transmitting pain to the affected extremity, Alton Ochsner, M.D., and Michael DeBakey, M.D., New Orleans, report in *The Journal of the American Medical Association* for January 13, 1940.

The medical term for the condition is thrombophlebitis. The exact cause of this condition remains unestablished in spite of voluminous clinical and experimental investigations. It is a condition which may follow an operation and its incidence is reported to be on the increase. The importance of the results reported by these two authors can be realized when it is pointed out that, in addition to the risk of sudden death, the condition not infrequently may result in more or less disability of the victim during his entire lifetime.

In two of the patients two extremities were involved, making seventeen extremities that were treated. "The number of injections necessary to produce relief of all manifestations varied," the authors state. "Six had only one injection, five had two injections, three had three injections and one each had four, five and six injections, respectively. Thus, relief was obtained in 65 per cent of the cases by two injections or less.

"The results obtained were quite dramatic. There was relief of pain within fifteen to twenty minutes after the injections. In all six cases in which a single injection was given the relief of pain was permanent after the injection. Of the remaining eleven thrombophlebitic processes in which more than one injection was given there was complete and permanent relief of pain after the second injection in eight and after the third injection in three.

"Approximately 50 per cent of the patients were fever free within forty-eight hours.

"Whereas the length of time that swelling exists in these conditions varies considerably, in general a severe process is complicated by swelling of the extremity for long periods. This may persist throughout the life of the individual and is one of the most distressing manifestations of the process.

"Whereas," Drs. Ochsner and DeBakey continue, "it cannot be definitely determined what the ultimate outcome will be in the cases herein reported, it is probable that there will be no subsequent swelling, because in every instance the patient was up and about the ward for several days before returning home, and in no instance was there any swelling at the time of discharge.

"Three patients have been seen nine months, two months and five weeks, respectively, after discharge from the hospital and all have remained free from any manifestations. In one the swelling had completely disappeared in three days, in five after four days, in one after eight days, in two after nine days, in three after ten days and in one each after eleven and twelve days."

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1940?

Ever since the fateful October, 1929, most of us have hoped for better times. Yet at the beginning of each year we have been assailed by doubts, fears and uncertainties. We wish it were otherwise and that we might now look confidently to the new year. But, if we are to be honest with ourselves, prospects for 1940 appear none too promising.

In this country we enjoy a measure of prosperity and freedom unknown to most nations of the world. Here, where one would expect to find lightheartedness and optimism, there is foreboding about the future. We are overwhelmed at the prospect of a long European war, the repercussions of which we cannot escape. And there is, of course, the chilling thought that we ourselves may become involved in the conflict. As if this were not enough, there are urgent domestic problems demanding our attention. Unemployment, for example, is most acute. Although increased trade with nations at war has brought a temporary upswing of business and a degree of prosperity, the real solution for our social ills remains to be found.

Conditions such as these should, and undoubtedly do, give physicians plenty to think about. It has become clear to the most optimistic that the medical profession will not remain unaffected by them. For this reason, physicians would do well to get down to cases and determine as accurately as possible what is in store for them.

Before this editorial appears, Congress will be in session. How will Congress react to present-day conditions? Will it enact health legislation? Those who know say it will not do so because this Congress will mark an eclipse of any new broad social, economic or reform legislation. It is said that the Wagner Health Bill will be shelved, including its occupational disease features, despite the fact that the Senate Subcommittee on Education and Labor will have a new draft of the bill ready in January.

At the best, these are conjectures, although recent incidents point in the direction of conservatism. As this is being written, champions for the Wagner Bill are rallying their forces in spite of the fact that they are not getting much encouragement from the Administration. The danger to the medical profession in this situation lies in the fact that physicians may be lulled into a false sense of security. It should be remembered that politics are uncertain and that anything may happen. For this reason we must keep a watchful eye on all legislative proposals relating to the public health.

In so far as the Medical Society's 1940 program is concerned, it will be the most ambitious yet undertaken. The Society's Annual Scientific Assembly will be held during the month of October. It will be conducted on a much larger scale than last year's and promises to be one of the finest medical meetings held in Washington. There are numerous other plans under consideration. Unless we are drawn into the European war or there are unlooked-for internal disturbances, this year should mark a milestone in the Society's progress.

Qualities needed in these times are calmness, common sense and courage. If we are to fulfill our obligations to the public, we must hold to our course, never losing sight of the fact that the only justification for the existence of our profession is to alleviate the burdens of suffering humanity. Deplorable as world conditions are today, 1940 holds for physicians everywhere great opportunities for service.

WHEN INDIVIDUALISM FAILS

There are no more interesting figures in American history than the "Empire Builders" of a half century ago. Their story has been told many times. It begins with poverty and inevitably ends with vast power and riches. Among the greatest of his day was James J. Hill, the railroad magnate, who is credited with the development of the great Northwest. Hill typified the "rugged individualist" who, through sheer ability, courage and ruthlessness, attained his goal.

Now, of course, there were individualists in other fields who had as great influence over large numbers of people. Undoubtedly, many of them contributed more to humanity than Hill and his contemporaries in the not particularly scrupulous game of high finance. But the point is that, with the passing of our frontiers, these figures have largely disappeared from the American scene. Of course, there are still great leaders, but they do not exert the power they once did, since this is the day of organization. Individualism, as we formerly knew it, is for the most part a memory.

Organizations are effective to the degree that they possess able leadership and unity of purpose. Some have tremendous influence, but, like individuals, have shown characteristics of selfishness and little concern for the welfare of others. On the other hand, many have and are rendering a great public service.

How does the organized medical profession rank among these organizations? Without doubt, the American Medical Association is not only one of the most powerful medical organizations in the world, but few have contributed more to public welfare. However, the constituent bodies that make up the American Medical Association are not uniformly strong or effective. Some of them have yet to learn that social and economic problems of the day must be met by group action and that any other course may lead to disaster.

In pursuing this line of argument, the importance of individualism in the relation of the physician to the patient must not be lost sight of. It is this element that has contributed more than any other one thing to the excellence of medical service in this country. However, where public issues involving medical practice are concerned, physicians everywhere should, when necessary, abandon the individualism which is so important in their daily practice. Much progress remains to be made in this direction. Let us hope that the profession in all parts of our country will become more alert to the problems of the day, and willing as a group to assume leadership where the health of the public is concerned.

PERTINENT PARAGRAPHS

December Meetings Boards, Committees and Sections were in the midst of the year's activities during the month of December. Plans which had been studied for several weeks were nearing completion. Several projects are still being considered.

It is important in the opinion of the officers of the Society that members know that the various committees are active. For that reason, there is published in each issue of the MEDICAL ANNALS a list of Boards, Committees and Sections which have met together with the date of meeting. The list for December follows:

December 1	Committee on Public Policy
December 4	Section on Gastroenterology
December 7	Section on Neurology and Psychiatry
December 14	Committee on Arrangements for the 1940 Annual Scientific Assemby
December 15	Section on Ophthalmology & Otolaryngology
December 18	Obstetrical Board Executive Board
December 22	Advisory Committee to Women's Auxiliary

December 28 Board of Censors
Section on Pediatrics

Maternal Study Is Continued

The Society was presented with the following report by the Subcommittee on Maternal Welfare of the Committee on Public Health and the Section on Pediatrics at a meeting on December 6, 1939:

During the month of October the Medical Society of the District of Columbia received a communication from Dr. Ella Oppenheimer, Director of the Bureau of Maternal and Child Welfare of the Health Department, proposing (1) a continuation of the current study of maternal mortality, (2) the initiation of a study of stillbirths and neonatal deaths, and (3) the initiation of a study of other infant and child mortality. This communication was referred by the Secretary to the Subcommittee on Maternal Welfare of the Committee on Public Health and the Section on Pediatrics. After study by these two groups and consultation with the Health Officer and Dr. Oppenheimer, the original proposal has been modified as follows, mainly, as will be seen, to protect what are believed to be the rights of the Society in the disposal of data derived from such studies. It is, therefore, recommended:

(1) That the current study on maternal mortality by the Obstetrical Board be continued.

(2) That a joint board be set up to study stillbirths and neonatal deaths, to be composed of obstetricians, pediatricians and pathologists appointed by the President of the Society on nominations made respectively by the Washington Gynecological Society, the Section on Pediatrics and the Section on Pathology.

(3) That the Medical Society agrees to the representation on the above boards making the studies of the Bureau of Maternal and Child Welfare of the Health Department, and Children's Bureau of the Department of Labor, if desired, and the Medico-Chirurgical Society.

(4) That the Medical Society agrees to the proposed study with the distinct understanding that the boards shall prepare their respective reports on a calendar year basis, when possible, submit the same to the participating organizations, and that the data derived from such studies shall become the property of the participating organizations for such use as they may consider proper and expedient.

(5) That the proposed study of other infant and child mortality be not undertaken at this time.

The recommendations contained in this report were unanimously adopted by the Society.

Is Medical Literature Dull?

In the November 18, 1939, issue of the *Lancet*, the British medical publication, there appeared an address given by Sir Robert Hutchison on "Medical Literature." From it was gleaned a few paragraphs, which it is believed will be of considerable interest to readers of the MEDICAL ANNALS.

Sir Robert says that he finds medical literature dull and sets forth his views as follows:

"In considering the quality of medical literature as distinct from its quantity one has to distinguish between its content and its form. As regards the content, one is struck by the great excess of facts and the comparative absence of ideas, generalisations and hypotheses; there is, in short, too much observation and recording and too little reflection. Hence much of it is like a heap of bricks without any mortar to hold them together. The power of wide generalisation, of course, is very rare, but medical writers might at least show greater imagination, and the lack of this has the sad consequence that much medical literature is deplorably dull. This dullness is the more curious considering that the subject matter is so interesting. A medical textbook might well be like one of those omnibus volumes of 'Detection, Mystery and Horror'—for, after all, diagnosis is detection, disease is often mysterious and, heaven knows, our work is full enough of horrors—but, as it is, the average textbook is about as readable as a telephone directory. Take, for instance, the biography of a red blood corpuscle from its birth in the bone-marrow, with its capillary wanderings and its moving adventures by flood and field to its normal gradual old age and burial in the spleen or to its tragic end in a haemorrhage. It might be made a vivid Odyssey, but how dull it all sounds in a textbook of physiology—as arid and sterile, as dry and dusty as the sands of the Sahara. But medical writers are not only afraid of romance, they even fight shy of humour. They seem to think that dullness is expected of them and do not agree with the virgilian tag that 'in order to speak truth it is not necessary to pull a long face' and still less with the character of Stevenson's who thought that there was 'nothing like a little judicious levity.' And yet it is probably true that a writer has never really mastered his material until he can jest about it; until then it has mastered him. Whilst therefore the volume of medical literature betokens an intense activity of observation and research, its content on the whole is dull and pedestrian."

Parking Privileges Refused

Parking privileges in the District of Columbia have been sought by the Society's Committee on Public Policy. A conference was held with Mr. W. A. Van Duzer, Director of Vehicles and Traffic, and he promised to give the matter careful consideration. In a communication received from him under date of December 21, he states that the District's Corporation Counsel has the following to say:

"To comply with the requests involved here would result in unlawful class selection, and thus be arbitrary and invalid, from a legal standpoint, because, not being a matter involving revenue, or public welfare, there would be failure of operation on all the persons entitled to the use of the public streets."

This matter will be considered further by the Committee at an early meeting.

An Opportunity to Subscribe

Physicians who wish to subscribe to Group Hospitalization, Inc., should forward their applications together with a check, made out to the Medical Society of the District of Columbia, for six months' dues, not later than February 15. The books of Group Hospitalization are again being opened to members of the Medical Society on March 1, 1940, and the subscribers' contracts will become effective as of that date.

Two hundred and fifty-one physicians subscribed last summer, their contracts becoming effective on September 1, 1939.

Society Opposes Transfer

The Society has gone on record as opposing the reorganization proposals for the Government of the District of Columbia which relate to the transfer of the Commission on Licensure to a Department of Licenses, unless the transfer in no way affects the operations of the present Commission. The Society has informed the District Commissioners of its position.

What! A Glee Club?

Not long ago, an official of the Society was heard to say that he wished it were possible for the Society to have a glee club or some other musical organization made up of its own members. He assured a group of doctors, who were listening to his views, that more fraternizing by physicians with similar tastes would prove beneficial to the Society.

It has been the experience of other medical organizations that social activities for their members have improved professional relationships. Not a few medical societies have a social hour following their regular meetings, thereby providing an opportunity for physicians to become acquainted and to learn to know each other better.

If the organization of groups whose interest in music, drama and other arts will bring about a better understanding, and at the same time provide enjoyment for those participating, there is much to be said in favor of an effort along this line being made.

Would our physicians welcome an attempt along this line?

OUR CASE: WHERE DOES IT STAND?*

Charles S. Baker, *Counsel for The Medical Society of the District of Columbia*

In answering the question, "Our case, where does it stand?," it is essential that we differentiate between "cause" and "effect."

In doing this, we must keep constantly in mind the fact that the "law" is a compilation of broad legal principles. It is affected by a vast number of judicial opinions, which we call precedent, and modified or altered by acts of Congress or the State Legislatures, which we term "Statutory Law."

These legal influences must be examined and construed by Judges who in the very nature of things will naturally reflect to some degree that background of present-day thought which is commonly termed "public opinion."

In the light of this background, some of the simplest questions often become complicated and difficult. Suppose we ask, "Is the man who designed our public buildings merely plying his 'trade' or is he following a 'profession'? Is the carpenter or mason who does the work plying his 'trade' or following a 'profession'? Are the physician and the lawyer plying a 'trade' or following a 'profession'?"

The Distinction between Professions and Trades

Such questions would be of no particular interest unless they had a definite and material bearing upon vital matters affecting the physician and the lawyer. Let us seek the reasons for distinguishing between the professions and trades by referring to two recent cases concerning the doctor and the lawyer.

On September 2, 1938 a California Court in People v. Pacific Health Corporation held in part:

> "We are unable to agree that the policy of the law may be circumvented by technical distinctions in the manner in which the doctors are engaged, designated or compensated by the corporation. The evils of divided loyalty and impaired confidence would seem to be equally present whether the doctor received benefits from the corporation in the form of salary or fees. And freedom of choice is destroyed, and the elements of solicitation of medical business and lay control of the profession are present whenever the corporation seeks such business from the general public and turns it over to a special group of doctors. . . ."

Recently the Appellate Court of New York State, in the case of People v. Peoples Trust Company, held:

> "The relation between attorney and client is confidential in the extreme. The attorney is under all the obligations attached to a fiduciary relation, and above all things he owes undivided loyalty to his client, unhampered by obligations to any other employer. These duties are enforced by the drastic remedy of disbarment proceeding, a measure outside of and in addition to other legal remedies. An attorney may not divulge confidential communications of his clients or the advice given thereon. It is obvious that the intervention of a corporation, the general employer of an attorney, between him and his client, is destructive of this necessary and important relation. There can be no longer uninfluenced devotion to the client's interests. There exists

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* Excerpts from address given before the Society, November 1, 1939.

> along with, and necessarily influencing, the devotion to the client, the duty which the attorney owes to his general employers. Divided obligations in trust relations are obnoxious to the law, and in none more so than in that of attorney and client. It was to remedy the growing tendency of corporations to enter the field of practicing law, and perform legal services through lawyers in their general employ and owing loyalty primarily to them and not to the client, that this law was enacted."

POLITICAL AND ECONOMIC TRENDS

To understand our present situation, we must analyze matters from three distinct angles, economic, political and legal.

An illustration of the political and economic trends, directly affecting the physician, may be seen in the pending Wagner Act to amend the Social Security Act.

This Bill was referred to the Committee on Education and Labor. This Committee in turn appointed a Sub-Committee to hold hearings on the Bill. The Sub-Committee filed a report on August 4, 1939, suggesting the need of "additional study and to consult further with representatives of lay organizations and of the professions concerned." They said, in part:

> "The Bill under consideration is the result of several years of preparatory study and discussion.
>
> "The national health program is a logical outgrowth of the movement which led to the enactment of the Social Security Act in 1935."

The attitude of the Sub-Committee may be inferred from their opening statement:

> "However good our accomplishments compared with those of other countries or those of our own past, it is nevertheless true that the conditions of health in this country could be and should be very much better than they are. We are convinced, from the testimony presented before us, that if existing medical knowledge and skills were adequately marshaled and put to work, the prevalence of disease and disability could be greatly lessened, tens of thousands of deaths annually could be prevented, the average expectation of life could be appreciably increased, and our people could be rendered healthier, happier, and more productive."

THE PRESENT CASE

A few years ago the opinions in the California and New York cases would have represented an absolute defense to the pending indictment. These two cases were "good law" in February 1937 when a certificate of incorporation was filed by Group Health Association, Inc.

When the District Attorney and the Corporation Counsel questioned the right of this corporation to "practise medicine," the latter filed a petition in equity for a "declaratory judgment." In this petition Group Health Association, Inc., set forth certain facts concerning its organization, incorporation and plans. It asked the Court to declare it to be a legitimate and legal corporation.

There were innumerable cases supporting the contention of the District Attorney and the Corporation Counsel, but Justice Bailey in his opinion held that this nonprofit corporation was not violating the Medical Practices Act nor the Insurance Law.

The matter then went to the Court of Appeals at the insistence of the Corporation Counsel alone, as the District Attorney failed to perfect his appeal. Thus, the Court of Appeals was not confronted with the question of whether the corporation is violating the Medical Practices Act but merely with the question of whether there is a violation of the Insurance Law.

The Court of Appeals held, September 11, 1939, in part:

> "It is admitted that the identical plan and service rendered here would not be 'insurance' or 'indemnity,' if offered by an organization owned, operated and controlled by physicians. It would then be a contract 'for service on contingency,' though the same element of risk and avoidance of its possible consequences would be present. We do not see how it is material to the size or relative importance of the element of risk and its assumption in the plan that the business control is in lay rather than professional hands. If the plan is for 'service,' not 'insurance,' in the one case, we think it is in the other."

Some time prior the *Yale Law Journal* carried an article discussing a case known as Pratt v. The British Medical Society. This case involved a civil suit brought by two physicians who had joined a clinic. They were to be paid by the clinic on an annual salary basis. They alleged that as a result of their activities they had been dropped from the British Medical Society and had been ostracized professionally and socially. They successfully sued the British Medical Society and certain of its members for damages. The opinion of the Trial Court in this case chanced to use the term "restraint of trade."

Now it so happens that there is a long line of British and American cases which are known as "restraint of trade" cases. These cases have to do with the sale of a business and the incidental agreement not to reënter that business within a given area for a given period of time. Some of these "restraint of trade" cases refer to the sale of a physician's practice, and the incidental promise of the physician not to reënter practice for a given period of time, within a given area.

Section 3 of the Sherman Anti-Trust Act provides:

> "Every contract, . . . or conspiracy, in restraint of trade or commerce, in . . . the District of Columbia, . . . is hereby declared illegal."

So it is argued the words "trade and commerce" cannot be defined and the "restraint of trade" phrase, being applicable to physicians' contracts, brings the physicians under the Act.

The Question Involved

The Sherman Act represents an attempt to regulate what might be termed "big business." It seeks to prevent monopolies and combinations which would tend to injure the public by lessening production or increasing prices.

Thus Section 1 of the Sherman Act, which deals with "trade or commerce among the several States," has been construed to deal with "trade and commerce" in the sense that is generally accepted. It represents barter or trade on a commercial basis and for profit or gain. It refers to the sale or exchange of goods, wares and merchandise.

There came a time when a group of the cleaners and dyers in the District of Columbia agreed to maintain a standard of prices charged for cleaning and dyeing. A suit was brought by the United States in equity to restrain them, alleging a conspiracy under the Sherman Act. The defendants contended that they were not subject to the Sherman Act because they were not "engaged in trade." The Court held that Section 3 of the Sherman Act which deals with the District of Columbia, while it is couched in the same language, may be construed to have a different meaning from Section 1 because not predicated upon the same Constitutional provision.

The Court suggested that even though a business in the District of Columbia dealt in personal service only and not in goods, wares and merchandise, it might, nevertheless, be engaged in trade, within the meaning of Section 3. The Court said, "In the first place, the word 'trade' is often, and, indeed, generally, used in a broader sense, as equivalent to occupation, employment or business, whether manual or mercantile. Wherever any occupation, employment or business is carried on for the purpose of profit or gain, or a livelihood, *not in the liberal arts or the learned professions*, it is constantly called a trade."

These two sentences represent the heart and soul of the question with which we are now dealing.

But we note that the Court in defining the word "trade" used a definition which excludes "the liberal arts and learned professions."

Now in passing, let me refer to the fact that the Atlantic Cleaners and Dyers case, while it represented what we might term "trade in services" alone, rather than in goods and chattels, nevertheless shot true to the mark so far as the spirit of the Sherman Anti-Trust law is concerned, because it represented an effort on the part of a group of business men to arbitrarily increase the prices which the public would pay over and above the prices which would normally develop through friendly competition.

It is thought that Group Health Association, Inc., and similar organizations seek to eliminate free competition.

Nevertheless, we must remember the "trend of the times," economic, political and legal.

It is interesting to note that in the Atlantic case, even though there had been a clear violation of the true intent of the Sherman Anti-Trust Act, the Government proceeded by a Bill in Equity, to enjoin. The apparent intent was to break up the combination but not penalize a group of men who may have thought they had a legal right to protect their own business interests in this manner.

So, too, in our case, the Government could have proceeded by seeking an injunction. However that may be, the indictment was secured.

A demurrer represents an attack upon the sufficiency of a given legal paper. In effect, a demurrer says, "admitting the truth of everything alleged in this legal document, we, the opposing parties, claim it is not legally sufficient to state a case."

And so the Demurrer was filed. The Demurrer raised many points. Only two points will be discussed: First, that the indictment was faulty and contained irrelevant and improper material; second, that the activities charged are not in "trade." The argument on the Demurrer alone consumed three full days.

Justice Proctor in his opinion said:

> "The defendants have raised objections to the sufficiency of the indictment as a pleading. These go mainly to the claim that many of the allegations dealing with essential and material features of the charge are vague, indefinite, and uncertain. The objections are far too numerous to deal with separately. There is merit to many of them. The indictment is afflicted with vague and uncertain statements. In some instances, material facts are altogether lacking. An important instance concerns the charge that one purpose of the conspiracy was to restrain the business of the Washington hospitals. The indictment is barren of any statement of the business methods used by a single hospital in the letting of its facilities and service to patients. This is fatal to that particular specification, for without such facts it cannot be known whether loss of patients through operation of the scheme would injuriously affect the economic welfare of any hospital. . . .
>
> "The inducement, as well as the charging part, setting forth the plan and purpose, and acts done to effectuate the conspiracy, abound in uncertain statements. Inference, opinion, and conjecture are also freely indulged. This is especially so in the inducement, much of which seems unnecessary to a statement of the charge. It is questionable whether some of it would be deemed relevant or competent in proof of the offense. Every indictment should be confined to a clear and dispassionate statement of essential facts. Thus, an accused can better know the exact offense with which he is charged and will not be confused in making his defense. Ordinarily improper matter in the inducement, unnecessary to support the charge, will not vitiate an indictment. It will be treated as surplusage and disregarded. But I doubt if such treatment would suffice to relieve these defendants of the prejudice likely to arise by an indictment which smacks so much of a highly colored, argumentative discourse against them. It must be remembered that when a case is finally submitted to a jury for their secret deliberations the indictment goes with them. . . .
>
> "Coming now to other specifications of the charge, 1, 2, and 5. Is the Association, or are its members or the hospitals, engaged in trade within the meaning of Section 3 of the Statute? The Association is alleged to be a nonprofit coöperative association of government employees engaged in the business of arranging for the provision of medical care and hospitalization to its members and their dependents. The plan and purpose, it is charged, was to hinder and obstruct the Association in procuring and retaining on its staff qualified doctors; to hinder and obstruct its doctors from the privilege of consulting with others and using the facilities of the Washington hospitals; and to hinder and obstruct the Association in obtaining access to hospital facilities for its members and its doctors from treating and operating upon their patients in the hospitals. The foregoing references to the Washington hospitals, in the plan set forth, forms the only support for the 5th specification, charging a purpose to restrain the business of operating said hospitals.
>
> "In previous discussion of the Cleaners and Dyers case, I have expressed the view that the Court in giving to the word 'trade' its full meaning adopted the definition of Justice Story as its own. That definition covers both the narrow and broad understanding of the term. Its most restricted sense comprehended 'traffic in goods, or buying and selling in commerce or exchange.' Manifestly, neither the Association, its members or the hospitals are engaged in that sort of trade. Nor do they, in my opinion, come within the broader class of manual or mercantile pursuits carried on for profit or gain without buying or selling goods. The business of

the Association was not of a manual or mercantile nature. It was a nonprofit coöperative institution whose corporate object was to render service in providing medical and hospital care for its members. The argument for the Government that the business of the cleaners and dyers involved merely the sale of service, and yet was held to be a trade, overlooks the fact that the very essence of that service was the skillful use of labor and material, quite equal to the 'art, mystery or trade' of a tailor, blacksmith or shoemaker, mentioned by Justice Story in illustration of manual and mercantile pursuits falling within the category of trade."

In trying to evaluate the future possibilities, one must keep in mind the fact that the Government strenuously defends its position on numerous grounds. To illustrate, the Government's brief states: "Certainly the practise of medicine is not in popular usage constantly called a 'trade' but that is beside the point. The term whose meaning is in question is 'restraint of trade.' That is a legal idiom, not a term of common lay usage. Viewed in the light of the common law and the evils against which the Statute was directed, there can be no question but that it covers restraint upon a doctor in the pursuit of his calling."

In closing, however, it may be of interest to outline the course which the matter is likely to take from this point forward.

Prognosis

When the District Court rendered its decision there were several courses open to the Government. They could drop the case. They could forsake the present suit and seek a new indictment. They could forsake the present suit and seek to proceed by way of a Petition in Equity. It was decided, however, to prosecute an appeal.

There is an absolute right of appeal to the Court of Appeals from final judgments of the District Court. The losing party has a right to file a petition, asking the Supreme Court of the United States to issue a writ of certiorari, ordering the record in the case to be sent up to them.

An Act of Congress makes it possible to file the record of the case in the Court of Appeals, and, without filing the briefs or arguing the matter before that Court, the losing party may immediately petition the Supreme Court of the United States for a writ of certiorari. This "short cut" is seldom attempted unless it is of the utmost importance to secure a final decision at the earliest possible moment. This direct approach was used, for instance, where one of the states was collecting taxes under a law which was being attacked as unconstitutional. For some reason this was the course pursued in the present instance.

The newspapers headlined the refusal of the Supreme Court to grant the writ of certiorari as a victory for the defendants. If the Court of Appeals had already confirmed the opinion of Justice Proctor, then this refusal would be a final victory. Such was not the case. The refusal by the Supreme Court returned the case to the Court of Appeals for their decision.

Briefs are being filed in the Court of Appeals. The matter will be argued shortly. A decision will follow.

The losing party in the Court of Appeals then has the right to seek a writ of certiorari from the Supreme Court and perhaps the most we can say is that there is more likelihood of securing the writ after a finding by the Court of Appeals than there was in the first instance.

Whatever may be the outcome, no one should lose sight of the fact that the present case is an extraordinary one and that the so-called guilt or innocence of the defendants may hang upon novel deductions recently conceived.

The defendants do not dispute the premise that the Constitution should not be construed narrowly but honestly and sincerely contend that an Act of Congress, even in times of great social and economic change, should not be stretched and distorted by administrative and judicial interpretation. Nor should such an Act be extended to matters never intended to come within its scope and purview. To hold otherwise would be to approve usurpation by the executive and judicial branches of the legislative functions of Congress.

MEETINGS

Wednesday, January 31: Symposium on Avitaminosis.

"Vitamin Therapy in Gastrointestinal Disorders," Albert J. Sullivan, M.D.

"The Diagnosis of Subvitaminosis C by Determination of the Ascorbic Acid Blood Level," R. J. Kassan, M.D., and J. H. Roe, M.D.

"The Use of Vitamins in Neurological Disorders," Antoine Schneider, M.D.

Wednesday, February 7: Business meeting.

Wednesday, February 14: The Section on Gastroenterology will present the following Symposium and Panel Discussion on Peptic Ulcer:

"Comparative Analysis of the Results of Various Forms of Medical Management of Peptic Ulcer," Ernest H. Gaither, M.D., Baltimore (President 1938-1939 American Gastroenterological Society).

"End Results and the Surgical Approach to Peptic Ulcer," George P. Muller, M.D., Professor of Surgery, Jefferson Medical School, Philadelphia.

Wednesday, February 21: No meeting.

Wednesday, February 28: The following program will be presented:

"Clinical Considerations Regarding the Use of Desoxycorticosterone Acetate Therapy in Addison's Disease," George W. Thorn, M.D., Johns Hopkins Hospital, Baltimore.

"Simmond's Disease: Presentation of a Proved Case with Consideration of a Differential Diagnosis," A. D. Daughton, M.D.

MEMBERSHIP

The following applicant was duly elected to membership at the business meeting, November 1, 1939:

Associate Member

Alfred Abramson, 208 North Washington St., Alexandria, Va.

The following were duly elected to membership at the business meeting, December 6, 1939:

Active Members

Everett Samuel Caldemeyer, 1029 Vermont Avenue, N. W.
Ralph Mearle Caulk, 1835 Eye Street, N. W.
Milton C. Cobey, 1835 Eye Street, N. W.
Francis Thomas Coleman, 1323 Kennedy Street, N. W.
Harold Albert Craft, 3100 16th Street, N. W.
James Albert Dusbabek, 900 17th Street, N. W.
John Ellsworth Everett, 6301 14th Street, N. W.
Isaac Phillips Frohman, 2925 Nichols Place, S. E.
Lendall Croxton Gay, 1650 Jonquil Street, N. W.
Henry Arthur Grennan, 1150 Connecticut Avenue, N. W.
Caroline Jackson, 1801 Eye Street, N. W.
Edward Aloysius Kelly, 2801 Pennsylvania Avenue, S. E.
Harvey Franklin Kreuzburg, 7852 16th Street, N. W.
Howard Ellsworth Newman, 18 Ninth Street, N. E.
Daniel Sondheimer, 1711 Rhode Island Avenue, N. W.
Joseph Washington Stein, 5000 Illinois Avenue, N. W.
William Dandridge Terrell, Jr., 1835 Eye Street, N. W.

Associate Member

Arnold Albert, Glenn Dale Sanitarium, Glen Dale, Maryland

The following were duly elected to membership at the business meeting, January 3, 1940:

Active Members

Donald William Ingham, 1418 Good Hope Road, S. E.
George Vincent Martin, 1150 Connecticut Avenue, N. W.
Donald W. Mitchell, 900 17th Street, N. W.
Petrene Abbe Shea, 3741 Huntington Street, N. W.
John Watkins Trenis, 1150 Connecticut Avenue, N. W.

Associate Members

Eugene James Alexander, District Training School, Laurel, Maryland
Elizabeth Rogers Vann, St. Elizabeths Hospital
J. Ross Veal, 2000 16th Street, N. W.
Alvin Eugene William Wode, 5020 Newport Avenue, Friendship Station, D. C.

The following applicants for membership will be voted on at the business meeting February 7, 1940:

For Active Membership

Thomas J. Ready, Georgetown University—1936
John Beverly Smith, George Washington University—1936

For Associate Membership

Helen Virginia Patterson, University of Oregon—1936
Frederick Daniel Suttenfield, George Washington University—1937

The following applicants for membership will be voted on at the business meeting March 6, 1940:

For Active Membership

Harold McComb Hobart, George Washington University—1936
Clarence Lee Miller, University of Maryland—1938
Anna Tulman-Rand, Boston University—1937

For Associate Membership

Charles Frederick Church, Harvard University—1931
Frieda Fromm-Reichmann, Albertus University, Germany—1913
Reuben Edwin Stone, St. Louis University—1927

Recent changes in membership status:

Active to Associate

Nathan Glaubach
George C. Ruhland

James M. Simmons
Mary Holmes

Resigned
Active Member

Joseph L. Nocentini

Dropped, pursuant to provisions of Chapter IV, Article V, of the Constitution:

Active Members

Ralph Cohen
*Frederick Young Donn
Maurice Russell Edmonston
*Roy F. Higgins
Robert Andrew Keilty
Paul Abraham Lichtman
Miles Parker Omohundro
Mark Perry Schultz
*George Walter Warren

Associate Members

Carl Preston Cline
George Brackett Dowling
*Frank W. Govern
Archibald W. Truman

* Dues paid since January 1. Name to be submitted to Executive Board for reinstatement.

Eight New Life Members

Chapter II, Article IV, of the Constitution of the Society, reads as follows:

> Life members shall be active members who have been active members for a total of forty years. They shall have all of the privileges of active membership and shall be exempt from paying dues and assessment.

Our honor roll now numbers 61. The congratulations of the Society are extended to:

Seniority Number		*Date of Membership*
246	Thomas Dowling	April 6, 1899
250	Thomas Allen Groover	April 21, 1899
251	Robert Scott Lamb	April 22, 1899
252	Carl S. Keyser	April 28, 1899
254	Frederick H. Morhart	October 6, 1899
257	Charles Stanley White	October 19, 1899
258	Harry Hurtt	October 26, 1899
260	Henry Alexander Polkinhorn	October 28, 1899

who have for forty years been on the roster, meeting all dues and assessments and lending their support to the Society by frequent attendance. Their status is now elevated to Life Membership.

NEWS AND PERSONALS

The Second Annual Congress on Industrial Health, sponsored by the Council on Industrial Health of the American Medical Association, will be held at the Palmer House, Chicago, January 15 and 16, 1940.

The Mississippi Valley Medical Society is offering its annual cash prize of $100, a gold medal, and a certificate of award for the best unpublished essay on any subject of general medical interest (including medical economics) and practical value to the general practitioner of medicine. Contestants must be members of the American Medical Association who are residents of the United States. The winner will be invited to present his contribution before the next annual meeting of the Mississippi Valley Medical Society at Rock Island, Illinois, September 25, 26, 27, 1940, the society reserving the exclusive right to first publish the essay in its official publication, the *Mississippi Valley Medical Journal.* All contributions shall not exceed 5000 words, be typewritten in English in manuscript form, submitted in five copies and must be received not later than May 1, 1940. The winning essay of the 1939 contest appears in the January, 1940 issue of the *Mississippi Valley Medical Journal* (Quincy, Illinois). Further details may be secured from Harold Swanberg, M.D., Secretary, Mississippi Valley Medical Society, 209–224 W. C. U. Building, Quincy, Illinois.

The Washington Home for Incurables has reported a vacancy for a resident physician. The duties are to work up admissions, of which there will be about sixty a year; to make rounds before leaving in the morning and once in the evening; to be on call during the evening and to be in the house at night. In return for this the appointee will receive comfortable living quarters, meals and laundry. The resident is not required to be in the Institution or to be on call during the day. Those interested should communicate with Dr. Linn F. Cooper, 2222 Que Street, N. W., Telephone North 3367.

The 4th Annual Intensive Post-Graduate Course in Ophthalmology will be given by the George Washington University School of Medicine, March 25 to 30, 1940. There will also be a practical course limited to twenty-five participants in surgery, ocular pathology and orthoptics, March 19 to 23. The fee for the practical course (course I) is $100.00, $25.00 payable at registration. The remainder of the fee is payable on matriculation. The fee for the intensive course (course II) is $50.00, $15.00 payable at registration, the remainder of the fee payable at matriculation. The guest lecturers for the intensive course are as follows:

A. Bielschowsky, M.D., Hanover, N. H.; Wiley R. Buffington, M.D., New Orleans, La.; Grady E. Clay, M.D., Atlanta, Ga.; Harry S. Gradle, M.D., Chicago, Ill.; Daniel B. Kirby M.D., New York, N. Y.; Peter Kronfeld, M.D., Chicago, Ill.; Ralph Irving Lloyd, M.D., Brooklyn, N. Y.; S. Hanford McKee, M.D., Montreal, Canada; C. S. O'Brien, M.D., Iowa City, Iowa; Avery DeHart Prangen, M.D., Rochester, Minn.; Bernard Samuels, M.D., New York, N. Y.; Albert C. Snell, M.D., Rochester, N. Y.; Edmund B. Spaeth, M.D., Philadelphia, Pa.; Georgiana Dvorak Theobald, M.D., Oak Park, Ill.; Phillips Thygeson, M.D., New York, N. Y.; Robert Von der Heydt, M.D., Chicago, Ill.; Scott Sterling, Rochester, N. Y.; Frank D. Costenbader, M.D., Washington, D. C.; Horace E. Allen, M. D., Columbia, Mo.; Commander J. C. Adams, M.D., Washington, D. C.; Lt. Col. Frederic H. Thorne, M.D., Washington, D. C.; Lt. Col. Virgil H. Cornell, M.D., Washington, D. C.; Helenor Campbell Wilder, Washington, D. C.; Elizabeth K. Stark, New York, N. Y.; Debora Dicke, Milwaukee, Wis.; and Dorothy Behner Holmes, Ph. D., Washington, D. C.

The Medical Society's Committee on Postgraduate Education is sponsoring a **Practical Postgraduate Course in Syphilology**. This is the first course undertaken by the Committee and one in a series which it has under consideration. Lectures given in connection with this course are as follows:

January 15: "Principles in Diagnosis and Treatment of Syphilis," John A. Kolmer, M.D., Professor of Medicine, Temple University School of Medicine, Philadelphia

January 22: "Interpreting Serologic Reactions in Syphilis," R. L. Kahn, D.Sc., Assistant Professor of Bacteriology, University of Michigan, Ann Arbor

In addition to the lectures a round table is conducted at the close of each lecture. Printed copies of the lectures are to be provided physicians participating in the Course.

In connection with the contemplated courses a survey of the Society's membership is being made. Members are being requested to indicate in which of the following courses they would participate if given the opportunity:

Psychoneuroses in General Practice
Office Surgical Procedures
Skin Diseases in General Practice
Obscure Fevers
Preventive Pediatrics

Returns to date indicate that there is considerable interest in several of these subjects. Members who have not returned the forms on which to indicate the courses they would like to see sponsored are urged to do so promptly.

Providence Hospital has just acquired a new incubator crib donated by the staff physicians. This equipment cost $425.00 and has a compact heating and humidification system.

The George Washington University Medical Society will hold its next meeting on January 20. Dr. William Wayne Babcock, Professor of Surgery and Clinical Surgery, Temple University School of Medicine, Philadelphia, will address the Society on some phase of abdominal surgery.

The Washington Ophthalmological Society will hold its next meeting on February 12. Dr. Raymond L. Pfeiffer of New York will be the guest speaker and he will speak on "Lesions of Chiasm." Dr. J. Beatty Griffith will give the case report.

The Washington Gynecological Society held its regular dinner meeting November 25, 1939, at the Mayflower Hotel. Dr. Norris W. Vaux, Professor of Obstetrics, Jefferson Medical College, Philadelphia, addressed the meeting on the subject, "Anemias of Pregnancy."

At the same meeting the Society endorsed the continuation of the maternal mortality study and the initiation of a similar study of stillbirths and neonatal deaths. The studies are a joint endeavor of the Washington Gynecological Society, the Medical Society of the District of Columbia, the D. C. Health Department and the U. S. Children's Bureau.

On January 18 the Society will be host to the Philadelphia Obstetrical Society in an all-day program at the Mayflower Hotel and at various hospitals. This will take the place of the regular January meeting.

The Georgetown Clinical Society will hold its annual Old-Timers meeting at the Carlton Hotel on

February 20. The program will be provided by the Fellows Retired. Among the Founders expected to be present are Drs. Roy D. Adams, Thomas F. Lowe, Joseph J. Mundell, S. Logan Owens and Prentiss Willson.

The following lectures to residents were given at **Children's Hospital** during December: December 12, 1939, "Common Orthopedic Conditions," Dr. Custis Lee Hall; December 14, "Poliomyelitis and Encephalitis," Dr. Joseph Wall; December 18, "The Anemias," Dr. E. Clarence Rice.

At the Sunday morning clinical conference, December 3, 1939, the following case reports were given: "Bilateral Lobar Pneumonia, Sickle Cell Anemia with Marked Anemia and Cardial Dilatation," Dr. Joseph S. Wall and Dr. Charles A. Millwater; "Cardiac Decompensation in a Three-year-old Child," Dr. Harry H. Donnally and Dr. Elizabeth Chickering.

The Smith-Reed-Russell Society of the George Washington University School of Medicine held its annual banquet on January 9 at the Army-Navy Club. The address of the evening was given by Dr. Francis R. Hagner. His subject was "The Assassination of President Lincoln and the Escape and Death of John Wilkes Booth."

The Residents' Journal Club of Children's Hospital presented the following program December 21: "Recent Studies on Oxyuris Vermicularis and Trichiniasis," Dr. Eugenia Cuvillier; a review of recent pediatric literature, Dr. William H. Breeden. A film on "Recent Advances in the Treatment of Anterior Poliomyelitis" was shown by courtesy of Mead Johnson and Company.

The 36th Annual Meeting of the Graduate Nurses' Association and the **League of Nursing Education of the District of Columbia** was held at the Willard Hotel, January 8 and 9, 1940. The meeting was devoted to a "Symposium on the Control of Syphilis and Gonorrhea." At the first session Dr. George W. Creswell spoke on "Treatment—Drugs and Their Action." At the second session Dr. David Kushner and Dr. R. M. LeComte discussed "Pathogenesis of Gonorrhea—Diagnosis and Treatment—Public Health Aspects."

The Woman's Auxiliary to the Medical Society of the District of Columbia has completed plans for its annual tea to be held in the library of the Medical Society Building on Tuesday, January 23, from 4 to 6 p.m. Mrs. Virgil Eugene Holcombe of Charleston, West Virginia, President-elect of the Woman's Auxiliary to the American Medical Association, has been invited to attend.

The **Subcommittee on Communicable Diseases** of the Committee on Public Health recently recommended to the Committee and the Executive Board that its name be changed to "Subcommittee on Child Welfare." The Subcommittee stated that it wished to broaden its activities to include phases of child health other than communicable diseases. This change was approved by the Executive Board on December 18, 1939, and by the Society on January 3, 1940.

Appearing for the **Speakers' Bureau** recently were: **Dr. Stuart O. Foster,** who addressed the Northeast Business Men's Association October 26 on the subject, "Carbon Monoxide Poisoning," and **Dr. Leslie French,** who spoke on "The Fate of Food" before the Brent School Parent-Teacher Association on November 13.

Dr. William Gerry Morgan recently presented two interesting and attractive volumes entitled "Medical World" to the Medical Society. The editors of this work have endeavored to assemble in permanent and attractive form artistic portraits of a number of men who are conspicuous for their contributions to medical science. These books are not only of value as an historical record but, from a standpoint of information, they are important as a reference work. On January 3 the Society voted to express its appreciation to Dr. Morgan for this gift.

Dr. Charles B. Campbell and **Dr. Richard T. Sullivan** were reappointed as Delegates from the Society to the Federation of Citizens' Associations for the year 1939–1940 at the meeting of the Executive Board on November 27.

A number of Society members have been called upon to speak before various **Parent-Teacher Asso-**

ciation groups in the city. On January 8 **Dr. Robert B. Hightower** addressed a group at the Raymond School on "How to Take Care of Children during Winter Months." **Dr. A. Barklie Coulter** discussed "Prevention of Tuberculosis" at the Keene School on January 9. **Dr. Roy Lyman Sexton** presented a travelogue on "Sunny Italy" at the Powell Junior High on January 9. **Dr. William DeKleine** spoke before the Grant-Weightman P.T.A. January 11 on the subject of "Child Health."

President John H. Lyons was cited as an "outstanding graduate" at the 30th Annual Alumni Reunion of Central High School.

Dr. Guy M. Leadbetter has been named to a committee to assist the local chapter of the National Foundation for Infantile Paralysis in making detailed recommendations for handling cases and funds. Chapter officials already have ruled that the proceeds from last year's President's Birthday Ball must be expended on victims of infantile paralysis.

Dr. Roy Lyman Sexton spoke at the first of a series of Monday evening health lectures under the auspices of the Central Y.M.C.A. on January 8. His subject was "The Hygiene of Nutrition and Diseases that Develop from Breaking the Rules." The series will run through March. Other speakers for January include **Dr. George B. Trible,** who spoke January 15 on the subject, "Your Nose, Throat and Ears and Their Care," and **Dr. Coursen B. Conklin,** who will speak January 29 on "What Every One Should Know about Heart Disease."

Dr. Wallace M. Yater discussed "The Mouth as a Causative Factor in Systemic Disturbances" from the medical viewpoint before the District of Columbia Dental Society on January 9.

Dr. J. Winthrop Peabody was elected president of the District Tuberculosis Association at the monthly meeting of the Board of Directors on December 21, 1939. **Dr. Luther H. Reichelderfer** was elected vice-president.

Dr. Edward M. Pickford addressed the American Business Club on January 10 on the need for infant incubators in local hospitals. He suggested that luncheon clubs could not sponsor a more worthy cause than the donation of incubator equipment to hospitals.

Dr. William F. Burdick announces that **Dr. Harold M. Hobart** is now associated with him in the practice of diseases of children at 5402 Connecticut Avenue, N. W.

Dr. J. H. Judson announces his association with **Dr. John T. Hazel** at Wilson Boulevard and North Kenmore Street, Arlington, Virginia.

REPRINTS RECEIVED

The following reprints have recently been received for which due acknowledgment is made:

"Roentgen Diagnosis of Pregnancy." Joseph F. Elward and Joseph F. Belair. Radiology, December, 1938.

"The Relationship of the General Condition of the Patient to the Healing of the Open Wound." Edward L. Howes. International Abstract of Surgery, June, 1939.

"Rate of Fibroplasia and Differentiation in the Healing of Cutaneous Wounds in Different Species of Animals." Edward L. Howes, Samuel C. Harvey and Cornelia Hewitt. Archives of Surgery, May, 1939.

"A Manual of Desirable Standards for Hospital Radiological Departments." The American College of Radiology.

"The Mechanism of Optokinetic Nystagmus." Norman P. Scala and Ernest A. Spiegel. Transactions of the American Academy of Ophthalmology and Otolaryngology, 1938.

"Histoplasmosis of Darling." Frank J. Shaffer, John F. Shaul, and Reginald H. Mitchell. The Journal of the American Medical Association, August, 1939.

"Early History, in Part Esoteric, of the Hookworm (Uncinariasis) Campaign in Our Southern United States." Charles Wardell Stiles. The Journal of Parasitology, August, 1939.

LLEWELLYN FLEET LUCKETT, M.D.

(1871–1939)

Dr. Llewellyn Fleet Luckett, a Life Member of the Medical Society of the District of Columbia, died December 31, 1939, at his home, 1419 Rhode Island Avenue, N.W., following a long illness.

Dr. Luckett was born in Frederick County, Maryland, on November 19, 1871, the son of the late Dr. William F. and Emma Luckett and a direct descendant of Captain Henry Fleet, one of the first settlers of Maryland. He also traced his descent from William Llewellyn, an early colonial settler.

In 1885 Dr. Luckett came to Washington with his parents, where he attended the Emerson Institute of Washington and Columbian College, receiving his medical degree from the latter (now known as George Washington University) in 1895. Following graduation he did graduate work at the Post-Graduate Hospital in New York City.

Dr. Luckett became a member of the Medical Association of the District of Columbia in 1898 and of the Medical Society in 1902. He was a Fellow of the American Medical Association and held membership in the Washington Therapeutical Society. He was also a member of St. John's Lodge, No. 9, O.A.A.M., of which he was a charter member. He was one of the organizers of the George Washington University Medical Society.

Dr. Luckett had practiced medicine in the District since 1895 and was one of the best known of the older physicians. He had served as consultant on the staffs of Garfield, Sibley and George Washington University hospitals, and as White House Consultant during the McKinley administration.

Surviving are his wife, Mrs. Annabella Morgan Luckett, and two sons, Dr. William F. Luckett and Horace Peyton Luckett, an attorney, both of Washington.

CHARLES AUGUSTUS SIMPSON, M.D.

(1882–1939)

Dr. Charles Augustus Simpson died December 9, 1939, at Lake Worth, Florida, where he had gone a week previously to regain his health. Dr. Simpson became a member of the Medical Association of the District of Columbia in 1909 and affiliated himself with the Medical Society of the District of Columbia in 1911.

He was born in Aldie, Loudoun County, Virginia, in 1882. He attended Manassas Institute at Manassas, Virginia, and received his medical degree from the George Washington University School of Medicine in 1906. He also studied at the University of Vienna in Austria. He was licensed to practice in the District of Columbia in 1907.

Dr. Simpson was Professor and Chief of the Department of Dermatology and Syphilology of the George Washington University School of Medicine, having been a member of the faculty since 1911. He had served on the staffs of the New York Post-Graduate Hospital, New York Health Department and the Skin and Cancer Hospital, and was a surgeon in the Medical Reserve Corps of the Navy. He held membership on the staffs of Emergency, Episcopal, Gallinger and George Washington University hospitals. He was a Fellow of the American Medical Association, a member of the Southern Medical Association and a member of the American Board of Dermatology and Syphilology.

Surviving are his wife, Mrs. Elizabeth Darlington Simpson, and two daughters, Mrs. Hayden Kirby-Smith and Mrs. Paul Kiernan, both of Washington.

(*Continued from page 17*)

2. Winternitz, M. C., Thomas, R. M., and LeCompte, P. M.: The Biology of Arteriosclerosis. Springfield, Ill., Thomas, 1938.
3. Feil, H.: Preliminary Pain in Coronary Thrombosis. Am. J. M. Sc., 1937, **193,** 42.
4. Weller, G. L., Jr.: Roentgenkymogram in Cardiologic Diagnosis. M. Ann. District of Columbia, 1939, **8,** 13.
5. Starr, I., Gamble, C. J., Donal, J. S., and Collins, L. H.: Estimations of Work of Heart During and Between Attacks of Angina Pectoris. J. Clin. Investigation, 1938, **17,** 287.

MEDICAL ANNALS
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PRACTICAL CONSIDERATIONS OF IMMUNITY IN SYPHILIS*

JAROLD E. KEMP, M.D.
Chicago

Efforts to keep patients with syphilis under treatment and to solve their various diagnostic and therapeutic problems frequently engage the clinician so completely that he overlooks the importance of the patient's own defense to his infection. Frequently also it is felt that immunity in syphilis is an abstract consideration of interest only to the laboratory worker and is of no practical importance to the physician actively concerned with the treatment of the patient. Since a large part of our knowledge of immunity in syphilis is based upon information derived from laboratory studies, one can understand the reason for this belief. There are nevertheless many instances in which consideration of the patient's own resistance to his infection aids us in understanding his particular clinical problem.

The resistance developed to syphilis has certain characteristics which distinguish it from resistance developed to other diseases and which must be thoroughly understood before it can be evaluated. In the first place, time is a prerequisite for its development[1]; that is, it does not become evident until the infection has been present for some weeks. Equally important is the fact that treatment inaugurated before the immune stage is established may abruptly terminate or at least delay its development. These two points are illustrated by table 1 which shows the frequency of second infections with syphilis according to the time at which treatment for the first infection was inaugurated. Of the 81 cases of reinfection included in this compilation, 56.8 per cent occurred in individuals in whom treatment for the first infection was begun before the 46th day, 40.7 per cent in individuals whose treatment was begun between the 46th and 91st day, and only 2.5 per cent of those in whom treatment was not begun until after the 91st day. A compilation of the results

TABLE 1

Second Infections in Rabbits and Man; Duration of First Infection at Time Treatment Was Begun (Modified from Halley and Wasserman[2]*)*

	DURATION OF INFECTION IN DAYS		
	0 to 46 days	46 to 91 days	91+ days
	per cent positive	*per cent positive*	*per cent positive*
Second infection in rabbits	85.8	35.7	4.7
Second infection in man	56.8	40.7	2.5

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* Read before the Society, October 25, 1939, as part of a symposium sponsored by the Syphilis Journal Club.

of the successful reinoculation of rabbits according to the duration of the first infection at the time treatment was instituted is also shown in table 1. As in man, the longer the infection was allowed to continue unaltered by treatment the less successful were the attempts to implant a second infection. It must not be inferred from these observations that late syphilis always confers an immunity to a second infection with syphilis. Reinfections are not infrequently encountered in rabbits with late syphilis, and acquired syphilis has been reported in individuals with indubitable congenital syphilis. In most instances, however, if immunity to the first infection is allowed to develop, it will afford satisfactory protection against a second infection.

On the basis of these two observations, i.e., that time is necessary for the development of immunity and that treatment of early syphilis terminates or retards its development, one would expect to encounter instances in which treatment begun before immunity had developed and not carried to the point of cure would materially influence the ultimate outcome of an individual with syphilis. Perhaps the most striking examples of such a sequence of events are those tragic happenings, the neurorecurrences. The majority of these episodes follow the same pattern—an individual with early syphilis receives a few treatments and then lapses. Within 9 days to 2 weeks after his last treatment he reappears with multiple or single cranial nerve palsies sometimes without but generally with signs of an acute meningitis. In such individuals the treatment received was sufficient to prevent the development of his own resistance but was insufficient to eradicate the infection in his neuraxis. When, therefore, the treponemas remultiplied, they encountered a virtually defenseless host bringing about a series of events much more severe than would have been encountered had no treatment been received. Moore[3] has shown that the ultimate outcome of individuals who develop neurorecurrences is much less favorable than that of individuals whose clinical neurosyphilis is not so precipitate. Fortunately, these accidents are relatively uncommon and regardless of their severity do not mitigate against the prompt and energetic treatment of early syphilis. They are mentioned here mainly because they serve as an excellent example of the topic under discussion.

The third point to remember is that the immunity developed in syphilis is not as perfect as the resistance developed to other diseases. After the secondary eruption has healed, provided this occurs spontaneously, the majority of individuals enter a period of latency. During this period there is no physical evidence of the infection and its presence can be detected only by means of blood tests. In a certain number of individuals the disease will remain latent throughout their lives. Whether or not treponemas remain in the tissues of such individuals is relatively unimportant. The important consideration is that they develop and maintain a lasting and effective resistance to their infection. In the remaining individuals resistance will terminate with the development of late lesions of the central nervous system, the cardiovascular system, bones, eye, etc. The time after infection at which this happens varies with different tissues. Whenever it occurs it represents a breakdown in the individual's immunity to his infection, the seriousness of which depends upon the importance of the tissues involved. It must not be inferred that the development of the lesion of late syphilis indicates a complete breakdown in the individual's resistance with a resultant redissemination of the treponemas. In quite the majority of instances only one type of tissue is affected and not infrequently its involvement is only partial. This tendency to breakdown must be remembered as one of the important characteristics of immunity in syphilis.

As pointed out, treatment for early syphilis, unless carried to the point of cure, frequently retards the development of immunity. There is evidence which suggests that, so far as the central nervous system is concerned, the immunity which develops after the inadequate treatment of early syphilis is inferior to that which develops in the untreated individual. This evidence is presented in table 2. As shown by this table, the incubation of clinical neurosyphilis in the inadequately treated individual (11.6 years) is 6 years shorter than in those individuals who receive no treatment (17.6 years) prior to the time their neurosyphilis became clinically recognizable. Whether this is also true of other tissues is not known.

TABLE 2

Effect of Treatment on the Incubation Period of Clinical Neurosyphilis[4]

AMOUNT OF TREATMENT	INCUBATION PERIOD
	years
None	17.6
Early inadequate	11.6

The final characteristic of immunity in syphilis is that different tissues do not share equally in the resistant state. It has recently been shown by Chesney that in the rabbit the cornea does not share in the general immune process, and he rightly assumes that this offers a possible explanation for the frequency of recurrent corneal lesions in both acquired and congenital syphilis. Certainly the frequency of neurosyphilis in contrast to the infrequency of syphilis of the stomach, for example, suggests something more than a mere predeliction of the treponema for nervous tissues, particularly since all the tissues are apparently equally involved in the dissemination of the organisms during the early course of the infection.

Although very little is known about the mechanism of the resistance developed to syphilis, there are two factors of known importance in influencing the course of the infection. They are the factors of race and sex.[5] Table 3 presents an arrangement of the various manifestations of late syphilis according to these two factors. As is shown in this table, in only one important category, that of cardiovascular syphilis (whites, 7.4 per cent; colored, 11.5 per cent), is the defense of the white individual superior to that of the colored. This is more than compensated for by the much less frequent occurrence of neurosyphilis (whites, 33.0 per cent; colored, 12.3 per cent) and the increased frequency of latency (56.6 per cent) among negroes than among whites (46.1 per cent). Although the incidence of benign late syphilis, i.e., syphilis of the bone, skin, joints, etc., is higher among the colored (negroes, 18.9 per cent; whites, 15.2 per cent), the difference is not great, and since vital tissues are not involved in such occurrences this finding is more interesting than important. The reason why negroes develop a more effective resistance to infection with syphilis than whites is not obvious. It has been suggested that the more severe manifestations of early syphilis in the negro provoke a more lasting and effective immune state. Reasoning from analogy one would expect females in whom the manifestations of early syphilis are relatively infrequent to develop less resistance than males in whom the lesions of early syphilis are relatively common. As will be shown presently, this is not the case.

TABLE 3

The Incidence of the Manifestations of Late Syphilis According to Race and Sex (Modified from Turner[6]*)*

TYPE OF LESION	RACE		SEX	
	White (3438)	Black (6562)	Male (5017)	Female (4783)
	per cent	*per cent*	*per cent*	*per cent*
Central nervous system	33.0	12.3	29.5	10.6
Cardiovascular	7.4	11.5	13.9	6.7
Latent	46.1	56.6	41.0	64.0
Benign	15.2	18.9	18.3	17.1

The increased severity of syphilis in males as compared to females is a striking illustration of the ability of the latter to protect themselves against the disease. As shown in table 3, neurosyphilis (males, 29.5 per cent; females, 10.6 per cent) is approximately three times more frequent and cardiovascular syphilis (males, 13.9 per cent; females, 6.7 per cent) twice as frequent among men as among women. The incidence of benign late syphilis is approximately the same (males, 18.3 per cent; females, 17.1 per cent). However, approximately 60 per cent more females than males reach a stage of latency in which positive serologic tests are the only evidence of infection. As has been indicated before, this represents a high degree of resistance. The factors which may be responsible for this merit a brief discussion.

The milder course of syphilis in females than in males has been known for years. As early as 1890 Fournier[7] ascribed it to an immunity to syphilis which developed during pregnancy. This explanation has been accepted until recently. There is little doubt that pregnancy can appreciably alter the course of syphilis. However, using neurosyphilis as an index, there is evidence which suggests that its influence is not always beneficial. This evidence is presented in table 4. As shown in this table, pregnancy occurring simultaneously with or immediately after infection apparently exerts a deleterious effect upon the patient's ultimate outcome (incidence of neurosyphilis, 47.2 per cent). On the other hand, pregnancy occurring from 6 to 36 months after infection apparently exerts a beneficial effect (incidence of neurosyphilis, 17.2 per cent), while pregnancy occurring 3 years or more after infection apparently does not influence its outcome in either direction (incidence of neurosyphilis, 34.3 per cent). It is realized that this group of patients is too small to permit definite conclusions. However, the differences in the incidence of neurosyphilis between the various groups into which they have been divided is sufficiently great to be of interest.

TABLE 4

Incidence of Neurosyphilis According to Duration of Infection at Time of First Pregnancy[8]

GROUP	NUMBER OF CASES	PER CENT WITH NEUROSYPHILIS
I. Pregnancy occurring within 6 months after infection	36	47.2
II. Pregnancy occurring 6 to 36 months after infection	35	17.2
III. Pregnancy occurring 3 years or more after infection	32	34.3
Total	103	33.0

That pregnancy is not the only factor responsible for the milder course of syphilis in females than in males, is indicated in table 5.

TABLE 5

Incidence of Neurosyphilis in Males and Pregnant and Nonpregnant Females[8]

GROUP	NUMBER	PER CENT WITH NEUROSYPHILIS
Males	400	47.0
Females	367	31.6
Females, with no history of pregnancy following infection with syphilis	219	34.7
Females, with a history of 1 or more pregnancies after contracting syphilis	148	27.7

As shown by this table, the incidence of neurosyphilis among the male patients included in this compilation was 47.0 per cent, and among the entire group of females, 31.6 per cent. The division of the females into two groups, those who experienced pregnancy after infection and those who did not, shows that while the incidence of neurosyphilis is higher among the nonpregnant (34.7 per cent) than among pregnant females (27.7 per cent), it is still lower among the former group than among males (47.0 per cent). Recent experimental investigation of this question has given us a possible explanation for this difference. It has been found that the course of syphilis in the male rabbit can be favorably altered by the administration of estrogenic substances.[9, 10] It has also been shown that the course of syphilis in castrated female rabbits is more severe than in normal female rabbits.[11] These findings suggest that the female sex hormones may be responsible for the milder course of syphilis in females than in males. What, if any, other factors are involved is not evident at present.

There is one final observation which can perhaps be included in the scope of this discussion. Reports have appeared in the literature recently of the successful use of killed cultures of treponemas and of extracts of the organs of immune rabbits in the treatment of human syphilis.[12, 13, 14] Not only are these results unconfirmed, but so far experimental evidence justifying trial of these substances in man is entirely lacking.

Although I have tried to limit this discussion to the practical aspects of immunity in syphilis, it may be that I have overemphasized some points and failed to stress others sufficiently. If I have made such an error I can do no better in rectifying it than to quote from Chesney,[15] whose work in immunity in syphilis is so well known. He says: "While little is known of its mechanism, it (immunity) is nevertheless a factor of great importance to the individual concerned. The very fact that the development of this resistance may be interfered with by active treatment in the early stages of the disease places a heavy responsibility upon the physician who undertakes to treat patients with early syphilis. He should clearly recognize that in instituting antisyphilitic therapy he is presuming to interfere with one of nature's own mechanisms, and he should realize that he is not justified in thus interfering unless he can improve upon nature. He cannot improve upon nature unless he is prepared and willing to carry out energetic and persistent treatment in the attempt to eliminate the infection from his patient altogether. This is the one lesson which the study of immunity in syphilis makes clear."

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Minnesota Doctor Recommends Freer Diets for Elderly People. Freer diets and less fear of overindulgence by older people would greatly improve their nutritional status, E. L. Tuohy, M.D., Duluth, Minn., maintains in *The Journal of the American Medical Association* for January 20, 1940.

Stressing the fact that ample diets are essential in order to obtain the necessary protective elements (vitamins), Dr. Tuohy declares that "all sorts of dire vicissitudes have been erroneously attributed to overindulgence. The elderly tolerate four light meals better than two heavy ones. When heavy meals distress them they leave out many articles, supposedly because of qualitative distress.

"The fields, the garden and the grocery store are still the correct source of routine supply of the protective nutritional elements. Persons with normal appetites who get satisfaction from a wide variety of foods obtain through mother nature's liberality as much of these substances as they need.

"However, many persons either do not or cannot eat, and acute and more or less temporary deficiency conditions arise in which the drug store's pharmaceuticals are of the greatest aid in restoring balance.

"W. B. Castle, M.D., Boston, has vividly stated that vitamins are to the body what oil is to the crank case; hard driving increases both the need and the consumption of oil. So suspect vitamin B deficiency when energy wastage has occurred or gross water loss, as in diabetes, severe vomiting or diarrhea."

Although he recognizes that the use of vitamin concentrates is often based on sound research and reasonable premises, Dr. Tuohy urges discrimination in their use. "A huge volume of vitamin concentrates is sold to the public," he says. "Few physicians have failed to order the various combinations or isolated products. We have used them much as our predecessors used 'bitter tonics.' Reasonable honesty compels us to weigh the need of much of this treatment. The claims that vitamin B_1 has a toning effect on the digestive tract are supported. It may be given in substantial doses, especially when elderly patients are pitted against severe physiologic impairment. This selective utilization promises to promote sanity in the field of vitamin treatment."

NERVOUS AND MENTAL COMPONENTS OF GASTROINTESTINAL DISEASES*

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The field included by the term "gastrointestinal diseases" is much too large to cover in a single presentation, even when one is dealing with only one particular aspect of that field. Therefore, in order to bring into the foreground some important principles and findings I have selected a few samples which may serve to integrate closely the specialties of gastroenterology, neurology and psychiatry.

There is very little danger at present in going too far with the idea that people must be treated instead of diseases. The accumulated successes of laboratory investigation, associated as they are chiefly with internal medicine, have contributed not a little to the unfortunate separation of the physical and psychic aspects of clinical medicine. But the more recent universal tendencies to regard the individual as a unit have stimulated everywhere studies designed to coordinate biologic and psychobiologic findings in disease.

In concentrating on our special topic at this time, one may say that gastrointestinal disorders associated with nervous and mental manifestations are themselves too numerous to attempt a complete discussion of the whole group, but in an attempt to think logically one may make a rough division of the nervous manifestations into (1) those developing secondarily to diseases of the gastrointestinal tract, and (2) those apparently primary and thus initiating the disease of the tract.

Concerning the first group there is very little discordance in the opinion that serious lesions of the intestinal tract due to known or unknown toxins, various forms of enteritis and cancer and other new growths, produce a state of mind that varies from a simple uneasiness to more or less severe depressions, often associated with fatigue and even to paranoid and other severe psychoses. The circulating products of the degeneration in the lesions representing these disorders also actually produce local or diffuse changes in the brain substance with not infrequently a special affinity for one or another of the vital nerve nuclei in the central nervous system. On the other hand, symptoms may appear in the gastrointestinal tract having their origin outside of this system, and it is conceded that the interpretation of abdominal pain is still an open topic that has never been fully analyzed.

Among the symptoms engendered from primary conditions in the nervous system, Gauss[1] has mentioned three types of syndromes: First, there is what he calls by the general term "dyspepsia syndrome," in which there is abdominal consciousness, nausea, vomiting, pain and a loss of appetite or morbid hunger or capricious desires for food. This condition is found in expanding brain lesions, neurosyphilis, organic epilepsy and in some cases of migraine. For example, pituitary tumors have caused a feeling of fullness after meals, bloating, belching and sometimes a severe oppression in the epigastrium. The cramping in these conditions has been interpreted as due to irritation of the autonomic nervous system through the premotor area of the brain cortex, the hypothalamus and the vagus nerve.

The second fairly common syndrome is characterized by acute paroxysmal attacks, seen in epilepsy, neurosyphilis and migraine. In epilepsy the gastrointestinal symptoms may be seen as the so-called visceral type of aura, or they may appear as the equivalent of a convulsion. The pains may be so acute and sharp that surgical measures are indicated leading to a needless operation. There is epigastric distress in the form of burning sensations, persistent unrest, nausea, vomiting, cramps, intense thirst and the desire to defecate. In migraine we sometimes have the equivalent of headache which comes into focus as a gastric crisis and has been called "abdominal migraine," and there are also the well known gastric crises of certain forms of neurosyphilis with its excruciating irradiating pain, nausea and vomiting. The neurophysiologic investigations of Penfield and Gage,[2] Sherrington,[3] Watts and Fulton[4] indicate that there is probably a sensory autonomic representation for the gastrointestinal tract in the cerebral cortex which would account for the symptoms.

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* Read before the Section on Gastroenterology of the Society, October 2, 1939.

The third syndrome centers around peptic ulcer and other lesions in the upper part of the tract. A comparatively large number of theories has been formulated regarding the cause or causes of peptic ulcers. Secretory abnormalities, including disturbances of the endocrine glands, vascular lesions, ferments and cytolysins, bacteria, and local chemical and mechanical factors have been incriminated at one time or another by various investigators. Other workers have emphasized neurogenic factors and combinations as revealed in experimental data showing relationships between the cerebrum and peptic ulcer, between the diencephalon, the vagal and sympathetic nuclei and the plexuses of Auerbach and Meissner and the local ulceration in the stomach. Still others have insisted on psychogenesis as playing the major role in initiating and maintaining the lesion.

The investigations of Cushing[5] and others have apparently established a relation between tumors of the brain, peptic ulcer and other perforations of the upper part of the intestine. On the basis of this work, Cushing has formulated his neurogenic theory of peptic ulcer and believes that a relation exists between disorders of the midbrain and ulcers of the upper part of the alimentary canal. His attention was drawn to this situation by the experience of losing patients from perforation following what appeared to be a successful brain tumor operation. Although his views are not universally accepted, most workers believe that tumors of the hypothalamus or its pathways, as well as experimental lesions of the diencephalon, have some relation to hemorrhage, ulcers and perforations of the stomach and upper part of the intestine.

A review of the literature on this matter indicates that the cortex of the brain contains a motor autonomic inhibitory and stimulating representation and that the course of this pathway extends from the cortex to the hypothalamus, to the red nucleus, to the substantia nigra and to the vagus nerve, there being also present some sensory autonomic representation. Expanding lesions of the intracranial tissues are believed to irritate these pathways, thus producing the lesions and the symptoms in the gastrointestinal tract. As yet one is unable to find any very definite or exact localizing value since the reaction seems to be a somewhat diffuse vagal affair.

The general theory of nervous system involvement has been reinforced by the neuropathologic investigations of Vonderahe[6] and others. Vonderahe states that "while in some instances of peptic ulcer the action of the nervous system may be efferent and productive of the ulcer, in all instances it is efferent when the nervous system is the site of characteristic involvements unless a severe irritative lesion in the stomach or duodenum is established." The nervous system should be considered as representing a complete reflex cycle to account for the characteristic symptoms and signs of peptic ulcer. He found in cases showing clinically an ascending pulse rate which becomes very rapid that a punctate hemorrhage had occurred in the dorsal motor nucleus "implicating the cardiac neurones, destroying their inhibitory effect and leaving the heart entirely to the accelerating effects of the sympathetic innervation . . . the probable reason for many of the sequelae following recovery from a severe attack of peptic ulcer, the irritable pulse rate, the increased sweating, the signs of 'sympathetic imbalance,' all point to injury in the parasympathetic centers of the dorsal motor nucleus of the vagal nerve, while quick fatigability, irritability, emotional changes and alterations in regulation of metabolism, sleep and temperature indicate injury to the thalamus and hypothalamus." In fact, most investigators agree that peptic ulcer is generally associated with an unstable vegetative nervous process in which the parasympathetic division is usually dominant (Sharon[7]).

In reviewing this question one is impressed that peptic ulcer is still an obscure and etiologically vital problem with an unknown frequency in the population. It is said to be far less common in negroes, but much more investigation is needed on negroes and other racial divisions. There is definite indication that the disorder has been undergoing some changes during the last three or four decades as Alsted[8] in his recent little book entitled "Changing Incidence of Peptic Ulcer" has brought out, that ulcer hemorrhages have become more frequent, that the incidence has progressively changed from being more common in women to a relatively higher frequency in men (5:1, 1:1 and 1:3), and that the site of the lesion has moved from the lesser curvature of the stomach to higher frequency in the duodenum. We are apparently still in the dark regarding the causes of this shift since there is no definite evidence pointing toward either environmental or constitutional factors, but the evidence accrued from internal medicine, surgery and postmortem work points to the veracity of the statement.

We may now pass to the consideration of disorders in which a multiplicity of factors including character, personality and mental states play roles. The persistent present mode of clinical teaching still emphasizes irreversible organic factors, ignoring the mental ones or barely mentioning them, or even treating them with disdain. But we are gradually coming to the point of view that states of mind stimulate or initiate physiologic processes which are very similar to pathologic ones and lead to structural changes, and that perversion of function can easily lead to structural alteration. There is an old saying that "affections above the diaphragm tend to optimism and those below to pessimism." The condition known as ulcerative colitis with bloody diarrhea certainly in the severe cases creates a marked prostration with mental depression and at times serious states of anxiety. Here one can see the degree of mental disturbance related not only to the severity of the physical disturbance but also some relationship to the previous personality of the patient.

Wittkower[9] found that emotional disturbances were often superimposed on an unusual or abnormal personality, preceding the onset of ulcerative colitis. He found that 37 per cent of 40 patients showed psychologic abnormalities, and in 28 unselected cases a clear-cut emotional trauma was serious enough to be regarded as a precipitating cause. The common feature of all members of his group was the failure to express emotion, the tendency to bottle it up and to worry inwardly, and in rare emotional moments the presenting emotion was that of anger. He differentiated four types: (a) a shy, timid, self-centered individual disliking social gatherings; (b) a resentful, obstinately sullen, openly defiant person, difficult to get along with; (c) 14 of 17 patients were definitely pathologic, that is, they had obsessional thoughts, fears, pathologic impulses and pathologic overt behavior; and (d) in more than half the patients there was sexual immaturity and persistent dependence on the parents. On the clinical side the disorder apparently favors sedentary workers under 30 and women more than men, with general symptoms, fever, abdominal pain, anemia and so on, mixed in with emotional and personality features.

In evaluating the work done on this disorder one must conclude that emotional upsets are not the sole cause of the disorder known as ulcerative colitis else the condition would be far more common; and the next step leads one to formulate that there must be some variety of predisposition, lowered resistance, or some situation in the bowel which makes it particularly prone to the lesion. When the disorder is once established the mucosa may become modified physiologically, perhaps invaded by microörganisms secondary to the ulceration, which factors tend to complicate any primary etiologic situation. Is something produced in these people which in ordinary people under emotional stress might result in only a simple diarrhea? Both the "soil and the seed" require additional investigation before the riddle of the etiology of ulcerative colitis is completely solved. I should repeat that the psychologic background described is not necessarily the only cause of this obscure disorder, but the present trend is to interpret it as an important factor in the disease, and perhaps the emotional factor is the most important one.

That abnormal psychologic patterns are part and parcel of the so-called "mucous colitis" syndrome has been recognized by both psychiatrists and gastroenterologists for many years, and a number of special studies on the emotional factors have been reported. A recent one is that of Benjamin White and his co-workers[10] who, at Harvard, in their elaborate study of mucous colitis have found the personality characteristics of "tension, anxiety, resentment, guilt, sensitivity and rigidity of thought," which are interpreted as consistent with tensional states of long standing. In their opinion, "such tensional states lead to chronic stimulation of the autonomic centers and in certain instances to the liberation of acetylcholine in the parasympathetic endings in the colon," thus producing the symptoms characteristic of the disorder.

Other conditions showing a more intimate connection between the mind and gastrointestinal symptoms are not at all uncommon. As an example, it should be interesting to discuss the disorder known as "anorexia nervosa." Various degrees of this condition are seen almost daily in gastroenterologic clinics. In 1868 Sir William Gull[11] described a condition which he called "hysteric apepsia." However, his classical description appeared in 1873, when he described the syndrome characterized by extreme emaciation and amenorrhea in the absence of demonstrable structural disease. He called this "anorexia nervosa." At about the same time Lasèque[12] described the condition as "hysterical anorexia." Numerous articles and opinions since expressed have added very little to our knowledge of the situation.

Apparently it occurs chiefly in adolescent girls, but it is encountered at other age levels and very occasionally in men. There is an uneasiness after taking food, epigastric distress or constipation, emaciation and low basal metabolic rate, low blood pressure and a flat blood sugar curve. These patients are usually quick, alert, active, restless and commonly deny all ill health until emaciated to a degree not seen in those with organic disease still able to be up and around. As Gull said, "These wilful patients are often allowed to drift their own way into a state of extreme exhaustion when it might have been prevented by placing them under different moral conditions."

The disorder is generally seen in women between the ages of 15 and 25 who reveal the history of a gradual self-restriction of food, leading to extreme emaciation with a 35 to 40 kilogram weight reduction, the individual weighing as little as 50 pounds in extreme cases. In spite of this physical deterioration, there is usually excessive mental and physical activity, with apathy toward the emaciation. In addition to general food restriction there may develop bizarre, one-sided, gastronomic tastes for odd foods, or for one thing (e.g., olives or prunes). Food forcibly administered is rejected by regurgitation if possible, but not for the reasons expressed by a depressed or delusional psychotic patient. The rejection is asserted to be on the basis that the food causes nausea, pain or abdominal discomfort "too terrible to bear." There is practically always a secondary amenorrhea.

From the psychologic angle this has been called a true compulsion neurosis time and again, with the symptoms representing a masked suicide. Unhappy home relations, unfavorable family environment with spoiling and overindulgence on the part of one parent and hate and hostility directed toward the other, introverted personality types, intellectual superiority, marked unmitigated stubbornness, temper tantrums, impulsive outbursts, meticulous and deliberate obsessive mental habits, excessive orderliness, frustrations in heterosexual adjustments are reported as prominent in the histories of these patients. Jealousy of members of the family of the same sex is usually prominent in the picture.

There seems to be a biphasic adjustment in the sense that there is an intense repression of hostile instinctive impulses plus self-punishment and elements of gratification. The syndrome has sometimes constituted an early manifestation in cases of schizophrenia.

In all comparatively severe cases, it is necessary to isolate the patient in a sanitarium or hospital and there institute artificial alimentation and also psychotherapy immediately. Special drugs are rarely indicated. According to Chatagnon,[13] the patient should receive 2 daily doses of raw sweet milk, yolks of 2 raw eggs, and lemon or orange juices. A daily dose of 250 or 500 c.c. of dextrose solution to aid in the restoration of tissue balance is administered for a variable period.

When the patient begins to recover, some form of physiotherapy procedure in order to reëducate the muscles should be instituted, and later the physician is confronted with the problem of aiding in the social readjustment to the family and to society. The mortality is said to be about 13 per cent, and many relapses are seen after the patient has been apparently well for some time.

In my own experience any type of treatment is liable to fail and the patient slowly starve to death, with emaciation, loss of appetite without digestive disturbances, reduction of food intake to a minimum, persistent amenorrhea and the peculiar mental state of euphoric type persisting until almost the end. It is rather interesting to mention as a side remark that one of my patients who died in this manner always persisted in the belief on which she harped constantly that there was something wrong with her brain in the form of a tumor or other lesion which the doctors had never discovered. This brings us to the consideration of the possible relationship between pituitary cachexia or Simmonds' disease and anorexia nervosa.

Simmonds[14] himself thought that the cachexia was fundamentally mental in origin and Sheldon[15] and others have asserted that pituitary cachexia and anorexia nervosa are fundamentally the same except for some differences in predisposition. One differentiation seems to be that anorexia nervosa is always due to starvation, while Simmonds' disease often occurs when the diet is adequate; that is, it is an emaciation without food deficiency or at most with some distaste for certain foods.

Sheldon has recently suggested that anorexia nervosa may be a "functional Simmonds' disease, a pituitary blackout of psychological origin," and one might say that this conception has become the popular one, although the two conditions are probably two different entities, superficially similar but with different constellations.

It is well known that some patients with Simmonds' disease recover during pituitary endocrine therapy. Mental conflicts seem to be pretty definitely the cause of anorexia nervosa. This idea is considerably fortified by Bruckner's detailed psychologic study[16] of 2 girls, 16 and 18 years of age, with pituitary cachexia and anorexia nervosa, and by Pardee's study[17] of 8 cases which led him to the generalization that he was dealing with a psychoneurotic Simmonds' syndrome.

Instinctive conflicts are particularly apt to engender gastrointestinal troubles which usually start out with disturbances of appetite, leading one to state at once that appetite and hunger are two different things. Appetite is the psychic representation of food; hunger is the expression of an organic need which may be tested physiologically. For example, Scott and his coworkers[18] found that hunger sensations, that is, appetite, were more intense after the ingestion of alcohol but that it did not increase the amplitude of the hunger contractions of the stomach. In other words, appetite is increased without increasing hunger. This is one of the key points from which to work toward the relative values of psychogenic and organic components in the various disturbances which come to our attention.

Dr. Amariah Brigham,[19] one of the famous original "thirteen" in American psychiatry and the founder of the *American Journal of Insanity* (1844), was appointed in 1843 to the first superintendency of the Utica State Hospital. In 1840 (one hundred years ago) he published a book entitled "An Inquiry Concerning the Diseases and Functions of the Brain, the Spinal Cord and the Nerves," in which is to be found an interesting comment on "dyspepsia," a term which included a number of stomach disorders, as they are now understood. He stated, "The reason why civilized man is most subject to indigestion is to me obvious. Everyone knows that excitement and anxiety impair the appetite and hinder digestion. The mental agitation consumes or hinders the transmission of the nervous fluid or nervous power from the brain to the stomach that is necessary to create an appetite and to complete digestion. The same cause prevents the proper secretion of bile and renders the bowels turbid." Since Dr. Brigham completed his professorship in anatomy and surgery in the College of Physicians and Surgeons, Columbia University in 1840, this opinion must have been gained before he was an orthodox psychiatrist.

The gastrointestinal tract lends itself readily to emotional influences which produce alterations in the tonicity and secretions of these hollow mobile organs. Here malfunction can result in structural pathology, and a relatively large number of illnesses begin here on a functional basis. The fearsome, worrying types of disposition, those who are sensitive without the ability to make the proper compensations for injured feelings; those not constituted or educated to meet anything beyond the bare requirements of a normal, comparatively quiet existence; those who are confronted with obstacles too great to overcome; those whose viewpoints are distorted through fighting against outstanding odds; those who are tired and overworked; those who continue to follow a professional or social existence the very essence of which is distasteful and which through pride, or for economic reasons, they hesitate to give up or reorganize completely the life plan; and finally those who are inadequately informed on the competitive aspects of social, economic and other living conditions of their particular environment, are all primed and most frequently suffer from these so-called functional gastrointestinal disorders.

It thus becomes increasingly certain that the personality of the patient and his particular patterns of adaptation to the environment should constitute the main focus of investigation. No special study of environmental factors as such is indicated, since environments are usually difficult enough for all.

One must eventually come to the realization that disease wherever found in the human body is a psychosomatic reaction with both components present, but usually one is more strongly emphasized than the other. The old dualistic concept of "mind and body" is being gradually discarded by psychologically-minded physicians. It is now even possible for the psychiatrist and the biochemist to meet on common ground in terms of the neural and nervous mechanisms which produce their effects through the intermediation of chemical substances. We are now in the midst of forming a new synthetic concept of mind and body wherein the inheritance, the person, the disease, the environment and social adjustments are combined in one picture. This conception of the individual as a dynamic entity may well become the outstanding achievement of twentieth century medicine.

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(Continued on page 69)

HEMORRHAGIC ADNEXAL LESIONS PRODUCING "ACUTE ABDOMEN" WITH INTRAPERITONEAL HEMORRHAGE*

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No truer statement has ever been made than that the surgical abdomen is indeed a temple of surprises. Especially is this true when one is dealing with such a group of gynecologic conditions as ruptured tubal gestation, ruptured corpus luteum and ruptured Graafian follicle, which have as a common operative finding intraperitoneal hemorrhage. Although none of these conditions is new and all have been studied and reported upon, the recognition and preoperative diagnosis of any one of them still remains difficult.

In 1851 Nelaton (according to Primrose[1]) reported for the first time on accidental rupture of the corpus luteum, and in 1858 Peuch (according to Primrose) applied the term "apoplexy of the ovary" to the rupture of the Graafian follicle with injury to the ovary. To date a total of 367 cases of ruptured ovarian retention cysts have been reported in the literature.[2]

Prior to 1883, when Tait[3] first operated upon a case of ruptured tubal pregnancy, this condition was of interest chiefly from a pathologic point of view. Indeed, it was so rare an affection that the early writers believed that even the directors of large obstetrical institutions might never encounter a case. To date, reliable statistics give the incidence of ectopic pregnancy as low as 1 in 303 pregnancies. Although this condition is not the rarity it was formerly thought to be, its recognition and preoperative diagnosis still remain difficult.

Before rupture the symptoms of extra-uterine pregnancy are so atypical, obscure and elusive, that the diagnosis is seldom made. This is also true for ovarian retention cysts. After rupture and intraperitoneal hemorrhage has occurred in any one of these conditions, the clinical picture becomes so clouded as to defy the diagnostic acumen of the most experienced gynecologist. A brief recourse to the literature will substantiate this statement.

Hoyt and Meigs[4] in 1936 reported a series of 58 cases from the Massachusetts General Hospital from 1929 to 1934, inclusive, in whom ruptured Graafian follicle or corpus luteum had been found at operation. They stated that the condition had been accurately diagnosed in 17 of these 58 cases. Their studies showed that hemorrhage from ruptured corpus luteum occurred more frequently than from ruptured Graafian follicle. In their opinion the diagnosis of ovarian rupture is most often confused with appendicitis. In severe cases the condition is mistaken for extra-uterine pregnancy.

Weil[5] recently reported 35 cases of rupture of a Graafian follicle or corpus luteum simulating acute appendicitis or ruptured ectopic pregnancy which had been collected from the surgical records of the City Hospital of Akron from 1932 to 1937. Of these, 30 were operated upon and 5 were treated conservatively.

In the group operated upon, the preoperative diagnosis was appendicitis in 24 and ectopic pregnancy in 6. At operation ruptured Graafian follicle occurred 18 times and ruptured corpus luteum 12 times. The 5 cases treated conservatively without operation had a clinical diagnosis of ruptured Graafian follicle. The 100 per cent failure in preoperative diagnosis in this particular instance may be partly explained by the scarcity of pelvic examinations in the number studied. For the entire series of 35 cases pelvic examination was recorded 15 times and rectal examination 3 times, and in 17 instances there was no record of either pelvic or rectal examination.

Israel[6] in his survey of the subject in 1937 stated that there is no pathognomonic sign or symptom of ovarian rupture with hemorrhage, and that it may be virtually impossible to distinguish preoperatively between acute appendicitis and this condition.

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* Read before the Medical Arts Society, November 9, 1939.

The literature shows similar confusion in the diagnosis of tubal gestation. Langman and Goldblatt[7] recently reported a series of 310 cases in which patients were operated upon for ectopic pregnancy or for some other condition but in which ectopic pregnancy was found at operation. Of this number, 218 diagnoses were correct and 92 were incorrect. According to their report the most frequent difficulty in diagnosis is that between ectopic pregnancy and chronic salpingo-oöphoritis. For the colored race, in which there is an extremely high incidence of salpingitis, this statement is undoubtedly true. In this same report no mention was made of either ruptured corpus luteum or Graafian follicle in the differential diagnosis of ectopic pregnancy.

In the light of our present knowledge it would seem that as these conditions have many clinical features in common, in addition to the operative finding of intraperitoneal hemorrhage, they can be grouped for the purpose of study under the caption of hemorrhagic adnexal lesions producing "acute abdomen" with intraperitoneal hemorrhage. With this view in mind, certain illustrative cases are presented showing points of similarity as well as certain diagnostic pitfalls encountered in dealing with them.

ILLUSTRATIVE CASES

Case 1. Mrs. E. B., a white housewife, aged 29, Para 8, entered Garfield Hospital on November 15, 1938 for a dilatation and curettage. Her gynecologic complaints consisted of intermittent, irregular vaginal bleeding, a drawing sensation in the back and stomach and slight nausea for the preceding 2 days. Her last regular menstrual period had begun on September 5, 1938. The October period was missed entirely. She believed herself to be pregnant. Her present illness began on November 10, 1938, when, after having been struck on the back and thrown against a tree by the door of a car from which she was alighting when it was inadvertently allowed to drift forward by the driver, she developed backache, lower abdominal cramps and vaginal bleeding. When the cramps and bleeding began she thought she was having a miscarriage and suggested this explanation to her physician. She was put to bed and ergot was ordered to control the bleeding. When this failed to stop the bleeding she was hospitalized for a dilatation and curettage.

Preliminary examination under anesthesia revealed the uterus to be slightly softer than normal and perhaps slightly enlarged. The left adnexa was slightly enlarged and tender and gave the impression of a cystic ovary about the size of a small lemon. Speculum examination revealed a pool of blood in the upper vagina, with the cervical canal somewhat patulous and discharging a fair amount of old dark blood.

Microscopic sections from the uterine scrapings showed particles of uterine mucosa more or less degenerated but with gland spaces lined by columnar cells of uniform morphology and arrangement, well separated and sharply defined from the stroma. There was no evidence of malignancy or of placental tissue. A diagnosis of endometritis was made. After a satisfactory recovery she was discharged upon her request on the third postoperative day. The same afternoon after she had been home for about 2 hours, on going to the toilet she was seized with a sudden sharp pain in the left lower quadrant accompanied by a feeling of syncope. Examination at this time revealed a very definite, soft, tender mass in the left vaginal fornix. A diagnosis of ruptured left tubal pregnancy was made, and she was readmitted to the hospital.

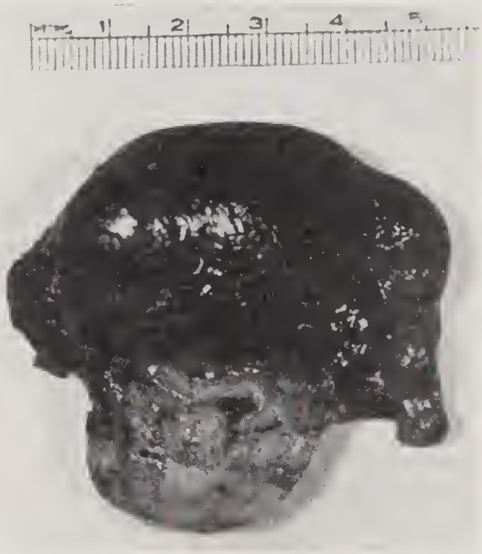

FIG. 1. Case 1. Extra-uterine gestation with intratubal rupture.

At operation the diagnosis of left tubal pregnancy with intraperitoneal hemorrhage was confirmed (fig. 1).

This case illustrates the unreliability of diagnostic curettage in the diagnosis of extra-uterine pregnancy.

Siddall and Jarvis[8] have shown that the incidence of decidua in uterine scrapings decreases with increased duration of bleeding. The 9-day period of bleeding which had elapsed prior to the curettage may explain the failure of the procedure in this case.

The history of bleeding following an abdominal injury was highly suggestive of an early abortion. In keeping with this diagnosis the small adnexal mass found on examination under anesthesia was considered to be a corpus luteum of pregnancy.

The Aschheim-Zondek test might have been of some aid in arriving at the correct diagnosis in this case. A positive test, together with the negative curettage, would have indicated an ectopic gestation; a positive test, without the curettage, would have merely strengthened the diagnosis of a threatened or incomplete abortion. Had the above-mentioned uterine scrapings been of diagnostic value, the patient would have been operated upon before rupture had occurred and a near-tragedy avoided.

Case 2. Miss M. B., a white salesgirl, aged 18, entered Garfield Hospital on October 29, 1938. Her complaints consisted of irregular vaginal bleeding, low abdominal cramps and pain in the left lower quadrant. She stated that her September menstrual period, which was delayed about 2 weeks, began on the 24th and was accompanied by low abdominal discomfort. This was intermittent and cramplike in character. The bleeding was mild at first, gradually increased in quantity with the passage of small clots, and continued for about 2 weeks. After this the flow became scant and intermittent until the time of admission. The low abdominal cramps and the discomfort in the left side persisted.

The patient had never been pregnant but admitted the possibility of conception prior to the recent bleeding. In fact, she stated that she thought she had been pregnant and had aborted spontaneously. Upon admission, her temperature was 99°F., her pulse rate 100, and her blood pressure 120/64.

Examination of the abdomen showed a wide, ragged, right rectus scar. Palpation revealed some tenderness on pressure over the lower abdomen with tenderness more marked over the left lower quadrant.

Pelvic examination revealed the uterus to be in good anterior position, slightly enlarged and somewhat to the right, with a very definite, soft, tender, left adnexal mass which could easily be felt by the examining fingers through the vaginal fornix. The right tube and ovary were both quite tender and slightly enlarged.

The red blood cells numbered 3,270,000, the hemoglobin was 66 per cent, and the white blood cell count 4,950. The differential count showed 74 per cent polymorphonuclears, 24 per cent lymphocytes and 2 per cent mononuclears. The blood sedimentation test was 13 mm. in 1 hour.

During the following 3 days the abdominal soreness and tenderness in the left lower quadrant persisted and the left adnexal mass increased in size.

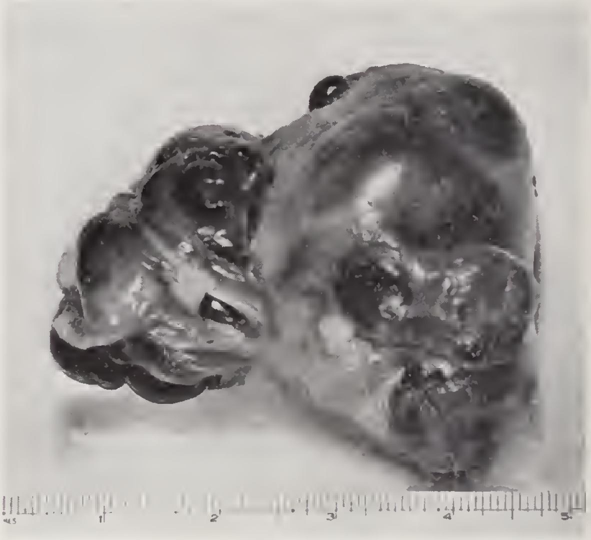

Fig. 2. Case 2. Left ovary with multiple Graafian follicle cysts and intracystic hemorrhage.

A tentative diagnosis of tubal pregnancy was made.

At operation a moderate amount of free blood was found in the abdominal cavity and the left adnexa was incorporated in a large, firm, nodular hemorrhagic mass (fig. 2). The right tube was enlarged and clubbed at its fimbriated end.

A final diagnosis of multiple Graafian follicle cysts, with rupture and intraperitoneal hemorrhage, was made.

This case illustrates how closely the symptoms of ectopic gestation may be simulated by this type of hemorrhagic adnexal lesion. The main consideration in this case was to rule out an active infection in the pelvis before operation. The finding of a normal blood sedimentation test was against this diagnosis as well as the diagnosis of ectopic pregnancy.

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The abnormal vaginal bleeding, which occurs in this type of cyst and simulates the spotting associated with ectopic pregnancy, has been explained on a hormonal basis. The follicle cyst may secrete an excess of estrin, which in turn produces an increased vascularity of the uterine endometrium with resulting spotting. The increased vascularity throughout the pelvis may also be a factor in the production of the bleeding into the cyst and its subsequent rupture.

Case 3. Mrs. C. P., a white woman, aged 25, entered the Sibley Memorial Hospital on March 27, 1938. Her admission complaints consisted of pain in the left lower abdomen, irregular vaginal bleeding, lower abdominal cramps and syncope. She stated that early in the morning on March 24, 1938 she was awakened with pain in her left side and vaginal bleeding. The cramp-like pain was associated with a feeling of weakness sufficient to confine her to bed. Her last regular menstrual period, which was perfectly normal, began on March 7, 1938 and lasted 5 days. Both the bleeding and the pain which initiated this illness continued until March 27, 1938, when the patient sought medical aid and was sent to the hospital.

Examination showed a well developed and well nourished young white woman, somewhat pale but not acutely ill; the temperature was 98.6°F., the pulse rate 80, and the respiratory rate 20 per minute. Examination of the abdomen revealed generalized tenderness over the entire lower portion with very definite muscular splinting over the left lower quadrant and to a lesser extent over the right lower quadrant. Pelvic examination revealed the uterus to be about normal in size, in anterior position, but slightly to the right side. Any movement of the cervix or fundus produced marked pain in the left adnexal region, and careful palpation of this area revealed a tender mass with some bulging of the left vaginal fornix. The identification of this mass was made very difficult from the reflex abdominal splinting which followed any pressure on the wall in this region. A tentative diagnosis of ruptured ovarian cyst or tubal pregnancy with intraperitoneal hemorrhage was made.

At operation a quantity of frank blood with many clots was found in the pelvic cavity. The origin of the hemorrhage was found to be a left hemorrhagic adnexal mass, which on gross examination gave the appearance of an ectopic pregnancy (fig. 3). Microscopic sections from this mass revealed the presence of a huge corpus luteum cyst and several fairly large follicular cysts containing serous fluid. In a number of areas the connective tissue was of a soft myxomatous variety containing a fairly large number of blood vessels.

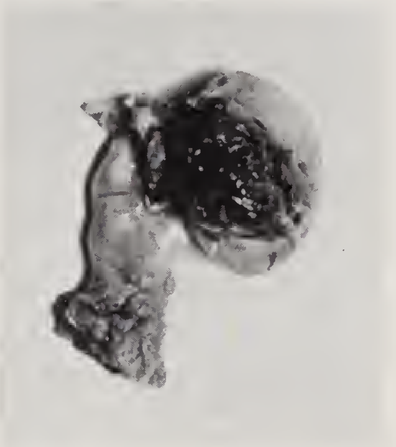

Fig. 3. Case 3. Ovary with a large corpus hemorrhagicum which was mistaken for an ectopic gestation.

In this case the onset of pain with vaginal bleeding, just preceding the anticipated date of the patient's regular period, was highly suggestive of a ruptured corpus luteum cyst.

As reported by other observers, this type of rupture occurs spontaneously and suddenly, often during sound sleep, as in this case, and is always accompanied by pain of variable intensity. The history of some exciting traumatic factor, which is present in a large majority of these cases, such as a blow on the abdomen, straining at stool, lifting heavy objects or coitus, was not present here.

The time interval of 3 days which elapsed before the patient sought medical aid and the persistent abdominal pain indicated continued bleeding with peritoneal irritation.

Case 4. Mrs. G. W. B., a colored woman, aged 29, Para 1, entered Garfield Hospital from the outpatient clinic on May 18, 1939. Her admission complaints were pain in the lower right quadrant, nausea and vaginal bleeding. She stated that her illness began 3 weeks before with pain in the right lower quadrant. This pain was described as a slight dull ache with sharp "catchy" pains at irregular intervals, and as it gradually became worse nausea developed. She stated that she had not missed any periods. The vaginal bleeding began on May 16, 1939, which was the expected date

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of the next regular period. Examination in the clinic at this time revealed a movable retroverted uterus. The left adnexa was essentially negative. Examination of the right side revealed a soft tender cystic mass which was thought to be either an enlarged tender tube or a small ovarian cyst. When the symptoms continued unabated, the mass in the right side seemed to have become larger, and since the Friedman test was reported positive she was sent to the hospital with the diagnosis of right tubal pregnancy.

At operation on May 18, 1939 a combination cyst of the right tube and ovary was found. The cyst in the ovary was described as of the size of a plum. Microscopic sections from the right ovary showed a number of follicles in various stages, including one filled with comparatively fresh blood. The right tube contained numerous irregular spaces lined by low columnar or cuboidal epithelium well differentiated and separated by an abundant stroma. In a few instances rather large polygonal cells were noted which were believed to be decidual cells.

The Aschheim-Zondek test, reported the day after operation, was negative.

This case might well be described as the case of the missing pregnancy. The history of colicky cramplike pain in the right lower quadrant, together with the presence of a tender right adnexal mass which increased in size while the patient was under observation, and a positive pregnancy test, filled all of the requirements for the diagnosis of a tubal pregnancy. Grossly, the specimen removed at operation did not confirm this diagnosis. The finding of decidual cells in the paraffin sections from the tube removed led the pathologist to make a diagnosis of tubal pregnancy. The second Aschheim-Zondek test which was started before and reported negative the day after operation was against this diagnosis.

The better explanation in this case was that the patient had an early uterine pregnancy which was aborted during the period of bleeding prior to the operation. This would be in keeping with the reversal of the pregnancy test. The decidual cells found in the tube on this basis represented a normal tubal response to a uterine gestation. On the other hand, Schiller[9] has shown the development of decidual formation in similar locations in the apparent absence of pregnancy. If such had been the case, the patient may never have been pregnant, and the first pregnancy test was just a misleading error. Whatever the correct explanation, the specimen removed at operation contained a Graafian follicle cyst with evidence of fresh hemorrhage.

DISCUSSION

For all practical purposes, ruptured ovarian retention cysts produce a clinical picture not unlike that of ruptured tubal pregnancy. In those cases which do not demand immediate operation the Aschheim-Zondek test is of considerable aid in clarifying the picture. While a positive test indicates either an intra- or extra-uterine pregnancy, a negative test does not necessarily exclude this, since an old ectopic pregnancy may be present with a negative test, depending on the time elapsing from the onset of symptoms to the performance of the test. However, this sort of error is really of no particular importance since the surgical treatment is the same for the entire group.

Many writers have stressed the fact that ruptured cysts occurring on the right side are frequently confused with acute appendicitis. For small ruptures with slight hemorrhage, comparable to the Mittel Schmerz of the German writers, this might be true. But for the more consequential lesions with frank hemorrhage this confusion would not exist. In my experience, subacute or chronic salpingo-oöphoritis is the most difficult condition to differentiate from unruptured tubal pregnancy. In this type of case the blood sedimentation test is of considerable value. In any event, after the rupture with hemorrhage has occurred in any one of the conditions presented in this study the clinical picture is essentially the same and requires the same surgical treatment.

SUMMARY

A brief consideration of ruptured tubal gestation, ruptured corpus luteum, and ruptured Graafian follicle cysts, together with illustrative case reports of these three conditions, has been presented. It is proposed in this study that these conditions be grouped under the heading of hemorrhagic adnexal lesions producing acute abdomen with intraperitoneal hemorrhage.

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DERMATITIS FROM A SANITARY BELT

REPORT OF A CASE

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Miss E. N., 26 years of age, consulted me on July 24, 1939 for an erythematous, vesicular dermatitis the size of a five-cent piece on the midsacral region which had been present for 48 hours. Questioning elicited the information that the patient had used a number of the "Lady Betty" sanitary belts but the plastic attachments of the last one were of a lighter pink shade. A patch test performed with the plastic attachment produced a marked erythematous, vesicular reaction in 24 hours which was more pronounced in 48 hours (fig. 1). The surface of the plastic attachment was thoroughly sandpapered to remove any veneer or coating which might have been applied, and another patch test was performed which in 48 hours also produced an erythematous, vesicular reaction. Similar patch tests were performed on 2 volunteers with negative results.

I believe that this case is worth reporting because the dermatitis could very well have been mistaken for recurring herpes simplex and also because it emphasizes the possibility of a sanitary belt being the cause of a dermatitis of this area and also of the pubic region in other susceptible individuals. I was unable to obtain any information concerning the plastic material which is used in the "Lady Betty" sanitary belt.

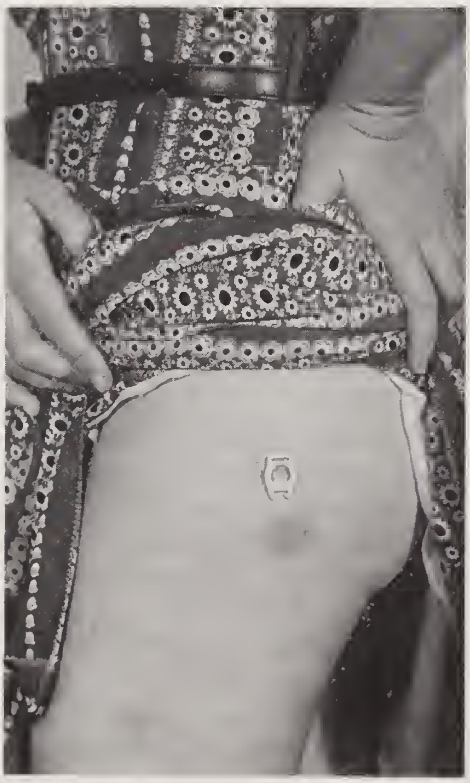

Fig. 1. Herpetic dermatitis caused by the plastic attachment of a "sanitary belt." The attachment is shown above the area of dermatitis.

1835 Eye Street, N. W.

CLINICO-PATHOLOGIC CONFERENCE*

THE DEPARTMENT OF MEDICINE, GALLINGER MUNICIPAL HOSPITAL

ALCOHOLISM AND THE HEART

WALLACE M. YATER, M.D., F.A.C.P.
Professor of Medicine, Georgetown University School of Medicine
AND
JOSEPH WALLACE, M.D.
Senior Resident in Medicine, Gallinger Municipal Hospital

November 16, 1939.

DR. YATER: Dr. Finkelstein, the Intern on Ward G, will present the next case.

DR. HAROLD FINKELSTEIN: This patient, J. A. R., Case No. A 39307, is a white man, aged 37, whose occupation when he worked was that of a mechanic. He was admitted on November 13, 1939, complaining of shortness of breath and swelling, burning and tingling of the feet. His symptoms suggestive of congestive heart failure started a year ago. He has had paroxysmal nocturnal dyspnea and episodes of edema of the feet. The latter disappeared usually with bed rest. He has been treated in this hospital before. Last April he was here for a month because of congestive heart failure. He was treated in the usual way for this condition and sent home on a maintenance dose of digitalis. It was learned at that time that he was a severe alcoholic, who went on numerous alcoholic debauches, during which he would eat practically nothing. After his former stay in the hospital he went back to his alcoholic habits, and has been getting progressively worse with his former complaints, to which have been added symptoms suggestive of vascular disturbance in the lower extremities.

His history is negative except for an occasional sore throat, pneumonia at 6 years of age and typhoid fever at 29 years of age. He has had several lengthy attacks of diarrhea associated with sore mouth during the past two years. He has been in the psychiatric ward for delirium tremens. There is nothing of special interest in connection with the various systems.

Physical examination on admission showed a well-developed and fairly well-nourished dyspneic patient, whose temperature was 98.6°F., pulse rate 100, respiratory rate 26 and blood pressure 120/90. He appeared to be quite sick and was complaining bitterly of pain in the toes. The tongue was smooth and shiny, but not particularly red. The veins of the neck were engorged and filled from below upward, as well as from above downward. The apex was approximately 9 cm. from the midsternal line in the 5th intercostal space. The rhythm was regular. There was a soft apical systolic murmur, and there were some subcrepitant râles at the bases of the lungs posteriorly. The liver was palpable three fingerbreadths below the right costal margin. The toes of both feet were very cyanotic and the feet were very tender. The femoral and popliteal arteries could be felt to pulsate, but neither posterior tibial nor dorsalis pedis could be felt. There was only very moderate swelling of the feet.

The venous blood pressure in the right antecubital vein was 315 mm. of saline solution (normal 40 to 120 mm.), and on abdominal pressure it rose to 375 mm. (which it does in cases of congestive heart failure). Oscillometric studies of the feet showed absence of pulsation, although at the ankle there was a very slight pulsation.

The urinalysis showed alkaline reaction, specific gravity 1.005, no albumin, no sugar. The red blood cell count was 5,170,000, there were 3,800 white blood cells, with 72 per cent polymorphonuclears, 14 per cent bands, 6 per cent lymphocytes and 8 per cent mononuclears. The Kahn test of the blood was four plus. A roentgenogram of the chest showed definite but moderate enlargement of the heart and evidence of pulmonary congestion. The electrocardiogram showed: rate 111, sinus rhythm, PR interval 0.18 sec., QRS interval 0.10 sec., with inversion of the main ventricular complex in leads 2 and 3, and marked slurring throughout. Lead 1 showed low voltage. The ST interval was depressed in lead 1 and elevated in the remaining leads. The T waves were inverted in lead 1.

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* These conferences are held under the chairmanship of the Head of the Department of Medicine, Dr. Wallace M. Yater, every Thursday from 2 to 4 p.m. Cases of particular interest, or those presenting diagnostic problems, are presented and discussed. This is a resumé of the discussion of such a case.

Dr. Yater: Dr. Finkelstein, what is your own opinion about the diagnosis in this case?

Dr. Finkelstein: Since no etiologic factor could be determined for the heart failure, and since the history was adequate for the development of a severe vitamin B_1 deficiency, it seems to me that the so-called beriberi heart is a good possibility. It is also possible that the patient has cirrhosis of the liver, although there is no clear-cut evidence therefor. There is a pregangrenous condition of the toes of both feet, the etiology of which is not certain. The patient may also have syphilis, but the positive blood Kahn is the only evidence for it.

Dr. Yater: Will Dr. Coneen, Resident in Roentgenology, discuss the roentgenographic findings in this case?

Dr. Lawrence W. Coneen: In interpreting the X-ray film not much aid can be given concerning the etiology of the heart failure in this case. The cardiac silhouette merely shows evidence of a large and probably decompensating heart.

Dr. Yater: Dr. Wallace is the Medical Resident in this case and I should like to have him give his opinion.

Dr. Wallace: The diagnosis of "beriberi heart" was arrived at largely by a process of elimination. There is no history suggestive of rheumatic infection, there are no diagnostic murmurs, and there is no evidence of hypertension. Syphilitic heart disease is ruled out because there is no aortic regurgitation. The only possibility of importance that we cannot entirely rule out is coronary artery sclerosis with myocardial infarction, followed by congestive heart failure. There is no history of any cardiac pain nor anything suggesting an acute coronary artery occlusion. The electrocardiogram is a little suggestive, but not definite. Considering the history of alcoholism, with dietary insufficiency and intermittent diarrhea with sore mouth, it seems that beriberi should be strongly considered. It is difficult to decide what the pregangrenous condition of the toes may be. Raynaud's disease can easily be eliminated because of the age, sex and lack of history of the specific attacks that occur in Raynaud's disease. Buerger's disease, thromboangiitis obliterans, seems to be eliminated because of the sudden onset and the exactly symmetrical distribution. Arteriosclerosis obliterans cannot be entirely eliminated, but there is no evidence of severe peripheral arteriosclerosis. There is no history of the patient having taken an ergot preparation. The possibility of exposure to cold must be considered. This patient has slept in his automobile quite often at night, but since he has been doing that the weather really has not been very cold. Apparently vitamin B deficiency is not often responsible for this sort of picture.

Dr. Yater: I do not think that the evidence is sufficiently clear-cut or adequate in this case to make an exact diagnosis at this time. However, I think Dr. Wallace has summarized very well the diagnostic possibilities. The "beriberi heart" is certainly a good possibility. I should like to say a few words about vitamin deficiencies. Chronic alcoholics are very prone to avitaminosis because of their irregular eating habits. The main deficiency seems to be that of the vitamin B complex.

Vitamin A deficiency is being discovered more and more in the form of night blindness, but is rarely severe enough in human beings to exist as an entity of importance in itself. The fish liver oils, liver, cream, butter, and green and yellow vegetables contain the fat-soluble vitamin A. The daily human requirement of vitamin A is 2,000 to 4,000 international units.

The vitamin B complex is composed of a number of important parts, most of which are not well understood. Deficiency of vitamin B_1, or thiamin, causes beriberi, peripheral neuritis and sometimes severe anorexia. Thiamin is present in dried yeast, wheat germ, whole grain cereals, green beans and liver. The daily adult human requirement is approximately 300 international units. In treating patients deficient in this vitamin, doses ranging from 10 to 50 mg. of thiamin chloride are necessary, preferably given intramuscularly during the period while the gastrointestinal tract is not functioning normally. Improvement should be seen within a week, otherwise it is probable that vitamin B_1 deficiency is not the main difficulty.

Vitamin B_2 deficiency is now being discussed in the literature. This vitamin is riboflavin, which is found in liver, yeast, egg yolk, kale, wheat germ and spinach. A deficiency of this part of the vitamin B complex causes cheilitis, or dry lesions of the lips with radiating fissures at the corners of the mouth. The therapeutic dose of riboflavin is 5 to 50 mg. daily. The antipellagra factor, P.P. of Goldberger, now known to be nicotinic acid, is thought to be a part of the vitamin B complex. It occurs in lean meats, dried yeast, wheat germ, liver and milk, and deficiency of this factor produces pellagra. The daily human requirements for adults are unknown. In pellagrins 150 to 500 mg. of nicotinic acid daily, in doses of 50 mg. each, is given by mouth, and remarkable results are seen within a very few days. There are other parts of the vitamin B complex, deficiency of which in man has not been definitely established.

Vitamin C has been found to be ascorbic or cevitamic acid. It occurs in citrus fruits, tomatoes, raw cabbage and green and leafy vegetables. Deficiency of this vitamin produces scurvy. One hundred to 300 international units is the average daily requirement for adults. This is provided by 5 to 15 mg. of ascorbic acid. The disease can be cured by diet alone, supplemented if desired by the intramuscular injection of 50 to 200 mg. of ascorbic acid daily.

Vitamin D, or calciferol, is also a complex vitamin, containing several different vitamins D. Like vitamin A it is fat-soluble, occurring in fish liver oils, irradiated ergosterol and egg yolk. Deficiency of vitamin D produces rickets. Infants and children require 400 to 500 international units daily, and when they have rickets, from 600 to 1,200 international units daily, preferably in the form of codliver oil.

The other vitamins, E, F, H and P, are not of particularly great importance in human disease so far as we know at present. Vitamin K deficiency, however, is important in cases of jaundice. Deficiency of this vitamin is responsible for the bleeding tendency in cases of jaundice. By giving the proper amount of this vitamin, together with bile salts, to jaundiced patients they may be much more safely operated upon, since the bleeding tendency may be controlled by this means.

The "beriberi heart" has until recently seldom been recognized in this country. As a rule patients with this condition are markedly edematous and the heart is greatly enlarged. The only way the diagnosis can be established is by curing the patient by means of vitamin B_1 administration. The usual treatment for congestive heart failure is also employed. Naturally there are some patients who are too far gone to be helped by treatment. We shall have to follow this patient along before we can make a definite diagnosis. It looks as if a therapeutic test in this case could not be obtained, since the patient is so critically ill and may not live.

January 11, 1940.

Dr. Yater: I shall ask Dr. Finkelstein now to report on the progress of J. A. R., whose case we discussed some time ago.

Dr. Finkelstein: The patient was treated for congestive failure in the usual way, and in addition was given large doses of thiamin chloride (vitamin B_1) parenterally. However, he did not improve, although the toes became definitely less cyanotic while under a heat cradle at 85°F. He finally became delirious, slightly jaundiced, more edematous, and developed Cheyne-Stokes breathing. The temperature was at first subnormal, it rose on the second day to 101.5°, and subsequently dropped to normal, and rose again to 101° on the sixth day, the day of death. The pulse rate fluctuated more or less with the temperature, reaching 125 at the highest point. The blood pressure fell progressively to 75/60 just before death.

Dr. Yater: Dr. Connerty, who performed the autopsy, is present and I shall ask him to tell us the main points of the examination.

Dr. Harold V. Connerty: The body appeared to be fairly well nourished, and there was very little edema left. The toes of both feet were purplish brown and the dorsum of each foot had a dusky hue. The left thoracic cavity contained only about 150 c.c. of blood-tinged fluid, and the right thoracic cavity about 50 c.c. In both hemithoraces there were filmy pleural adhesions. The peritoneal cavity contained about 200 c.c. of clear amber-colored fluid. The pericardial cavity contained only a few c.c. of clear straw-colored fluid. The heart weighed 565 grams and all chambers were enormously dilated. The valves all appeared to be normal. A large mural thrombus, measuring 6 cm. by 2.5 cm. by 2 cm., was firmly attached to the wall of the left ventricle, anteriorly and adjacent to the septum. It was firm, gray and granular. In the gross section it looked as if the myocardium subjacent to the thrombus was the seat of an old myocardial infarction. However, the microscopic sections did not bear this out. A small mural thrombus was also found in the apical region of the right ventricle. The coronary arteries were all open and showed practically no atheromatosis. Microscopic sections of the heart showed a relatively wide zone at the junction of the endocardium and mural thrombus of the left ventricle, where fibroblasts and capillaries had grown into the base of the thrombus. The myocardial fibers in many of the sections showed what appeared to be hyalinization with loss of cross striations. There were a few small areas of scar tissue in the sections. The lungs were intensely congested and edematous. The liver weighed only 1,012 grams, and microscopic sections showed widespread central necrosis of the lobules. The midzonal and peripheral cells in many areas were vacuolated. The spleen weighed 125 grams and contained an old hyalinized infarct just below the capsule, about 1 cm. in diameter. The kidneys each weighed 175 grams and appeared to be practically normal, except for an old infarct at the lower right pole of the right kidney, about 1 cm. in diameter. The other organs showed nothing worthy of note. One dorsalis pedis artery was dissected out and grossly appeared to be normal.

Although I am unfamiliar with the pathologic findings of beriberi, I do not believe the findings in this case would be inconsistent with that diagnosis in view of the fact that there is no other etiologic factor that can be found to account for the heart failure.

Dr. Yater: In the past there has been a great deal written about the effect of alcohol upon the heart. One recalls particularly the so-called beer-drinker's heart of the Germans. It is now known, however, that there is no such thing as a heart being damaged directly either by beer-drinking or alcoholism. The same is probably also true of cirrhosis of the liver. Alcoholics, however, are very irregular in their eating habits and often go for long periods of time on a very inadequate diet. I have seen a few who, after a long spree, developed evidence of heart weakness with tachycardia and atypical manifestations suggestive of coronary occlusion. In following these cases along, however, it was noted they did not develop the complete picture of this condition. When the body tissues are deficient in vitamin B_1 the nerves and muscles become degenerated and weak. The heart muscle partakes of this effect in many cases. When the diet is greatly deficient there are probably other factors lacking in the body which play a role in this state of myasthenia. Many patients do not develop the outspoken manifestations of beriberi.

I have here reprints of two good articles on the subject of "beriberi heart," one by Keefer[1] in 1930, and one by Weiss and Wilkins[2] in 1937. The "beriberi heart" is usually associated with more or less generalized edema, and there may be non-specific electrocardiographic changes even before true congestive failure has occurred. The right side of the heart is said to fail more commonly than the left, but this is probably not true. It is more likely that the whole heart fails at about the same rate. One must not mistake the anasarca of "wet" beriberi for cases of congestive heart failure. Determination of the venous pressure will show positively whether the patient is in congestive failure or not. The peripheral vascular system also partakes of a degree of weakness so that the manifestations are not only cardiac but those of peripheral circulatory weakness as well. The arterial blood pressure is usually normal. Infections in these patients are usually very serious because of the cardiac and peripheral circulatory weakness already present.

The disturbances in the feet of our patient are not easily explained, but Dr. Samuel Sugar, Junior Resident in Medicine, has reminded us of a recent article[3] in the *Annals of Internal Medicine* detailing a somewhat similar case in which there was a pregangrenous state of the feet in a probable case of beriberi.

The diagnosis of "beriberi heart" depends upon the history, elimination of important etiologic factors other than nutritional deficiencies, and responses to substitution therapy. Rest is very essential and vitamin B_1 administration vital. Digitalis may be employed to advantage, although it is much easier to prove the diagnosis by treating the patient with rest and substitution therapy only. If the patient is not too far advanced in his disease, he should recover completely after a number of weeks, or in a few months. I think in this case that we must agree with Dr. Wallace that the diagnosis of "beriberi heart" is the correct one, although Dr. Connerty did not find the so-called hydropic degeneration of the myocardial fibers usually alluded to as part of the picture of beriberi. In this connection, however, I must point out that at the time of autopsy there was very little congestion except in the lungs. This case illustrates another point; namely, that chronic alcoholism apparently is not a predisposing factor to early arteriosclerosis. The arteries in general, and the coronary arteries in particular, were in excellent condition.

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Describes Test for Cause of Gallbladder Disorder. A test which identifies with great accuracy the cause of noncolic gallbladder dyspepsia is described by J. Russell Verbrycke Jr., M.D., Washington, D.C., in *The Journal of the American Medical Association* for January 27, 1940. "Recognition of the condition and operation will bring cure to many sufferers from pain in the upper right portion of the abdomen who were formerly unrelieved," the author says.

The syndrome or combination of symptoms attributed to noncolic gallbladder dyspepsia is described by Dr. Verbrycke, for the first time he says, as being produced by mechanical pull of localized adhesions between the gallbladder and the adjacent colon.

Previous methods of x-ray examination of the gall-bladder showed the organ to be normal. Dr. Verbrycke's specific test for the diagnosis of such adhesions involves giving the patient barium sulfate twenty-four hours before and a gallbladder dye thirteen hours before taking a series of x-ray pictures. Both barium sulfate and the dye are resistant to x-rays, thus making visible the organs concerned. The successive series of x-ray plates will reveal, with practically no exceptions, whether the colon follows the contracting gallbladder and thus indicates the presence of adhesions. An operation for removal of the gallbladder then may be performed with a certainty of the condition requiring correction.

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WAR ON APPENDICITIS

The disease entity appendicitis has been known for more than half a century. Although there has been a marked advance in surgical technic in the last 50 years, the mortality rate from acute appendicitis has, if anything, increased. The Metropolitan Life Insurance Company[1] has found that from 1927 to 1930, inclusive, the mortality of acute appendicitis was 14.1 per hundred thousand population. A statistical study of acute appendicitis in Washington hospitals initiated by the Washington Academy of Surgery[2] agrees fairly well with statistics from all over the United States. In short, the average mortality rate from acute unruptured appendicitis is about 0.5 per cent, while that of ruptured appendicitis is about 20 per cent. If we presume that the population of the District of Columbia and its environs is, in round numbers, 650,000, we should expect about 90 deaths a year from appendicitis. Furthermore, studies by many observers throughout the United States agree that the two chief preventable factors in the mortality of acute appendicitis are delay of operation and the use of cathartics. In other words, at least 75 of these 90 deaths that will occur from appendicitis this year can be prevented.

This death rate is a challenge to the medical profession of the District. Philadelphia[3] has shown that by an educational campaign the mortality rate in appendicitis can be lowered by as much as 40 per cent. Surgeons may go into ecstasies about their pet little incision or go into histrionics about whether to drain or not to drain in ruptured appendicitis, but the fact remains that actual reduction in mortality will result only if the public, the retail druggist, the medical student, the intern and the physician are informed that a cathartic must not be given in the presence of abdominal pain, and that once the diagnosis of appendicitis is made delay in operating is dangerous.

It is interesting to note that there is a comparable number of traffic deaths in the District of Columbia. Congress is in an uproar; traffic directors are at their wits' end; the newspapers blazon the facts on the front pages; the radio, the cinema and even trained pups are used to impress the public that these traffic deaths must cease. Millions of dollars are spent on highway improvements and the installation of traffic lights; laws are made more stringent, all in the hope that a few lives may be saved. And yet where is there a single word spoken for these 75 who will die unnecessarily from appendicitis in the year 1940? We do not decry the valiant efforts made to reduce traffic hazards, but given a minute percentage of this same publicity and an educational campaign about appendicitis a large number of lives can be saved.

The disease being so well known and the important factors of prevention so clear-cut, a duty confronts the medical profession of the District which must not be evaded.

A. H.

SERVING ON A COMMITTEE

Serving on a committee of a local medical society is a task which should be taken seriously by the physician, otherwise he should not accept an appointment. This premise takes for granted that the committee has something to do and has not been created merely to give recognition to certain members.

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[1] Hobler, L. L.: Ann. Surg., 1936, **103**, 86.
[2] Putzki, P. S.: M. Ann. District of Columbia, 1935, **4**, 225.
[3] Bower, J. O.: J.A.M.A., 1939, **112**, 11.

Each committee member is under an obligation to serve faithfully and contribute something of real worth to his organization. Many do not realize this and are perfectly willing to let one or two on the committee do all the planning and the work that is necessary.

It might be interesting to consider the ideal member of a committee. What are his qualifications and how does he meet his responsibilities?

First, he should have the interest of the medical profession at heart. This may seem a platitude; however, the kind of a physician who fulfils this qualification is rarer than often thought for he must often submerge his personal feelings to aid in the accomplishment of what is best for the profession.

Second, he will give thought and study to the subjects which come up before the committee and will not be just one of those present. It is surprising how few people will assume responsibility or feel that it is their obligation to do more than is absolutely demanded of them. No committee can do much for the profession which is not made up of members genuinely interested in their assignments and willing to give the time necessary to complete the task which they have undertaken.

Third, he will make it a point to be on hand for all meetings unless his professional duties require him elsewhere. Too many physicians accept committee appointments and fail to attend.

Nothing is so demoralizing to a committee as to have two or three out of ten or fifteen members present. There is no quorum; therefore, action cannot be taken. Those on hand become discouraged and unless genuinely interested they also drop out and the committee becomes dormant.

Fourth, he will not allow one or two men to assume the entire burden for developing plans but will contribute ideas of his own. It is easy to find fault. However, unless the physician has a worthwhile contribution to make to the committee, he has no right to be critical. This does not mean that he must always be in agreement with the other members of the committee, but when a thorough discussion has been held a majority opinion should rule and he should subscribe to it.

Fifth, he will do what he can to make the meeting orderly and not overlong. Many committee members take up time with unnecessarily long discussions of unimportant details or, if the subject is of importance, devote too much time to discussing it. Nothing is so discouraging to the committee as a long and tiresome session.

Committees can do much to improve the efficiency of medical societies. Their personnel, however, should be carefully selected from those men who will meet the qualifications here described.

MAIL THAT IS NEVER READ

How much of their mail do physicians read? Of course, no one knows. If one were to judge by the response to communications sent them by their medical societies much of it receives belated, if not indifferent attention. However, this may not be a fair criterion. Nevertheless, one suspects from what one hears about physicians' offices that there is justification for the belief that many practitioners neglect their correspondence, or are not particularly systematic in their handling of it.

Desks littered with untouched letters and wrapped medical journals, it is reported, are not uncommon. When the evil day can no longer be put off there is a hurried examination of the accumulated mail with the result that most of it is consigned to the waste basket, where it undoubtedly should go. For physicians, more than most people, receive large quantities of printed matter. Under these circumstances important communications may be mislaid or may not receive the prompt attention they deserve.

At any rate this method of handling correspondence is, to say the least, not methodical, and may be a source of embarrassment if not inconvenience.

If statisticians were able to determine the amount of mail physicians do not read, it would undoubtedly run into many tons annually. Incidentally, such figures would be of considerable interest to advertisers who expend large sums in an effort to "sell" the doctor. Of more interest to medical societies would be a method by which it could be ascertained what physicians do read.

As previously stated, experiences of medical societies justify the belief that many communications directed to physicians by medical societies receive scant attention or are "lost" on the physicians' desks. For example, a medical society undertakes a project. A letter has gone forth to all members describing it in detail. Of course, it has already been approved in a regular meeting of the organization. Several weeks later when the project is well under way it is not uncommon for one or more physicians to protest that they knew nothing about it.

An equally common occurrence is for a physician to call about a dinner for which he wishes to make a reservation, stating that he must have received a notice but has mislaid it. He is informed that the dinner was held three weeks before.

Another physician desires to be on a list of practitioners to do a certain type of medical work for which he would be compensated. He had received a notice and a form which he should have returned. The list had been published for a month when he called. In this instance there may be financial loss.

Now, of course, it is not suggested here that all or even a majority of physicians neglect their correspondence. But there are apparently too many who do. What to do about it? Perhaps a campaign among the profession might help. And the slogan might be—"Read Your Mail."

PERTINENT PARAGRAPHS

January Meetings

The past month was an unusually busy one for Society members, particularly those serving on committees. Few evenings passed when some group was not in session at the Society's building. It is a pleasure to report that attendance at committee meetings has been excellent, and there has been genuine enthusiasm for the tasks which they have undertaken.

The following is a complete list of meetings held during January:

January 2	Subcommittee on Venereal Diseases
January 3	Business Meeting of the Society
January 9	Committee on Public Health
January 10	Scientific Meeting of Society
January 15	Committee on Public Policy Postgraduate Course in Syphilology
January 17	Scientific Meeting of Society
January 18	Committee on Public Health
January 19	Committee on Automobile Accidents Section on Ophthalmology and Otolaryngology
January 22	Subcommittee on Sanitation Executive Board Postgraduate Course in Syphilology
January 23	Obstetrical Board
January 24	Scientific Meeting of Society
January 25	Committee on Industrial Medicine Section on Pediatrics
January 29	Executive Board
January 30	Board of Censors
January 31	Scientific Meeting of Society

Postgraduate Course a Success

Although it was decidedly an experiment, the Practical Postgraduate Course in Syphilology more than justified the efforts put forth by the Society's Committee on Postgraduate Education. One hundred and seventy-nine physicians and members of allied professions enrolled. From reports which have been received, all were pleased with the lectures given by Dr. John A. Kolmer, Professor of Medicine, Temple University School of Medicine, and Dr. R. L. Kahn, Assistant Professor of Bacteriology, University of Michigan. The Committee is deserving of commendation for its fine work, especially the Chairman, Dr. Oscar B. Hunter, who devoted a great deal of time to this project.

Participants in this course are to be provided with printed copies of the lectures. They will be available in about three weeks. Notices will be mailed to those who enrolled that copies are on hand in the Medical Society's Office.

Growing Demand for Speakers

An unusual demand is being made upon the Society's Speakers' Bureau by various organizations in the District of Columbia.

The District's W.P.A. is putting on a series of Health Institutes, for which the Bureau is providing eighteen speakers.

In a communication dated January 9 the local department of the American Legion requested the Bureau to furnish speakers for a series of talks to be given in the Junior and Senior High Schools of the city. Arrangements are being completed through Zed T. Hamilton, Chairman of the Legion's Americanism Commission.

Beginning February 5, Mr. E. J. Lockwood, Director of Evening and Summer Schools, has requested three speakers a week for four months for Evening School classes at Central High School.

Letters have been directed to lay organizations in the District enclosing the pamphlet describing the Society's health education program. As a result numerous inquiries have been received from different groups, many of whom have commended the Society for its program.

Favor More Courses

At the time the Society was canvassed by the Committee on Postgraduate Education in connection with the Practical Postgraduate Course in Syphilology, a form was enclosed on which were listed courses which the Committee proposed to sponsor if there was sufficient interest in them. There has been a most satisfactory response.

Subjects which polled the largest number of votes were:

Skin Diseases in General Practice
Psychoneuroses in General Practice
Office Surgical Procedures

The Committee has not yet definitely decided upon the next course it will sponsor. As soon as it has met and come to a decision, an announcement will appear in the MEDICAL ANNALS.

Case Argued Before the Court of Appeals

On January 12 arguments on the appeal from the decision of Justice James M. Proctor in the prosecution of the American Medical Association, the Medical Society of the District of Columbia, the Harris County Medical Society, the Washington Academy of Surgery and twenty-one individual members were heard by the Court of Appeals.

Mr. Seth W. Richardson, counsel for the American Medical Association, and Mr. John E. Laskey, representing Dr. Prentiss Willson, made the arguments for the defense. Assistant Attorney General Thurman Arnold made his first personal appearance in connection with the case for the Government. Assisting him was Mr. John Henry Lewin.

It is not known when the Court of Appeals will render its decision. Upon it will depend the future course of the case. It is, of course, probable that one party or the other will seek a writ of certiorari to the Supreme Court of the United States.

More About Hobbies

Have you a hobby? If so, be sure to respond to a letter which will be sent to members of the Society within the next few weeks. An ambitious hobby exhibit is planned for the Annual Scientific Assembly to be held at the Mayflower Hotel, October 15, 16, 17, 1940. The Exhibit will be held in the Chinese Room at the Mayflower, where there will be ample opportunity to display hobbies to the greatest advantage. Details concerning the Exhibit will be set forth in the communication which members will receive. Members who are interested are urged to communicate with the Society's Office.

In connection with hobbies, it has been suggested that a permanent Entertainment Committee be created for the purpose of planning programs to be given by members of the Society at the dinner held at the time of the Annual Scientific Assembly. There are a number of talented physicians who, if given the opportunity for rehearsal, could put on a first class revue consisting of musical numbers, skits and sketches.

Are You on the Classified List?

On several occasions members of the Society have been reminded that unless they returned the forms sent them in connection with the classification of physicians according to the type of practice, they will not appear on the list used in the Society's Office. Although the form was sent members on July 3, 1939, 263 have not returned them. Completed forms have been forwarded to the Society's office by 626. Members who have failed to return their forms or who have lost them should give this matter prompt attention.

Plans for Assembly Progressing Rapidly

Although the Annual Scientific Assembly is still several months away, plans for the Assembly are going forward rapidly. There has been an unusual demand for space in the Technical Exhibit. At the present moment there is only one booth still unoccupied. Since occupancy in the Technical Exhibit is exceedingly important to the success of the Assembly, the Committee on Arrangements is very much gratified.

Within the next few weeks all subcommittees of the Committee on Arrangements will become active. In fact, some are well under way with their plans.

The Assembly will occupy twice as much space at the Mayflower as it did last year. Scientific sessions will be held in the Grand Ballroom, while scientific exhibits will be shown in the East Room, public health exhibits in the Pan-American Room, and the hobby exhibits in the Chinese Room. The technical exhibits will be displayed in the Promenade as usual.

A much larger attendance is expected this year and it is the belief of the Committee that it can be demonstrated that the Annual Scientific Assembly has unlimited possibilities.

SUBSCRIBE NOW FOR GROUP HOSPITALIZATION

Group Hospitalization, Inc., is again opening its books for members of the Medical Society who wish to subscribe. Applications which are received now will become effective March 1. The books will not be reopened until September.

Application forms have already been mailed to the entire membership. Those desiring to do so may send their applications together with their checks to the Society's Office before February 25. Checks should be made payable to the Medical Society of the District of Columbia since the Society acts as group treasurer.

Subscription fees vary according to the type of contract desired. The following contracts are available:

Contract No. 1: Covers only the subscriber. The rate is $7.80 per year or $3.90 semi-annually. The semi-annual payment plus the enrollment fee of $1.00 will be $4.90.

Contract No. 2: Covers the subscriber and husband or wife. The rate is $18.00 per year or $9.00 semi-annually. The semi-annual payment plus the enrollment fee of $1.00 will be $10.00.

Contract No. 3: Covers husband or wife and all listed dependents under the age of 18 years. The rate is $21.00 per year or $10.50 semi-annually. The semi-annual payment plus the enrollment fee of $1.00 will be $11.50.

A small charge of five cents is being made for the handling of each payment. Although this does not cover the expenses involved for there is considerable clerical work necessary, the Board is of the opinion that at least the postage required for mailing Membership Certificates and Identification Cards and notices should be paid by subscribers.

At the present time 251 Society members are included in this hospitalization plan.

SOCIETY ACTS ON REORGANIZATION PROPOSAL

At its meeting on January 24, 1940, the Society acted upon a report submitted to it by the Executive Board dealing with the proposed reorganization of the District Health Department. The Society by unanimous vote approved the Board's report, which reads in part as follows:

During the past week, two committees of the Society, the Committee on Public Health and the Committee on Public Policy, have met for the purpose of studying changes in the District Health Department contemplated in the proposed bill. . . .

The first report referred to here is that of the Committee on Public Health, which held a meeting on Thursday, January 18. This Committee, following its consideration of the facts at its disposal, adopted the following recommendations:

> "The Public Health Committee of the Medical Society wishes to go on record as strongly opposed to the plan for replacement of the present Health Officer for the District of Columbia by an officer from the United States Public Health Service, which is provided for in the proposed bill for the reorganization of the government of the District of Columbia.
>
> "The grounds on which we base our position are: 1) It is our belief that District health affairs should be administered by an official chosen by the constituted agencies, as, at least in affairs dealing with our own public health, the residents of the District are qualified for, and deserve self-government. 2) Because the present Health Officer, Dr. George C. Ruhland, has, since taking charge of the Health Department (incidentally, at considerable reduction in salary), given the District an able, efficient and modern administration, often against considerable odds, and has beyond question very greatly improved the public health of the District, and the agencies, such as hospitals, clinics, and so forth, whose function it is to deal with the public health; and therefore deserves the strong support of the medical profession and the citizens of the District of Columbia."

The Committee on Public Policy held two meetings to consider the Health Department situation, one on January 15 and another on January 19. At its last meeting it adopted a report, excerpts of which follow:

"The Committee took the view that it is chiefly concerned with the effect this legislation will have on the public. Of primary concern was the section of the proposed bill which relates to the District Health Department. It reads as follows:

> 'Section 209. Within thirty days after the approval of this Act the President of the United States is authorized to designate from among the officers of the United States Public Health Service Corps an officer who shall become Health Officer of the District, and during the period of service as Health Officer shall, under the general supervision and control of the Commissioners of the District, exercise all powers and authority now vested in the Health Officer of the District.
>
> 'If the pay and allowances of the officer so designated be less than the compensation of the Health Officer of the District at the time of the passage of this Act said officer shall be entitled to receive such compensation in addition to his pay and allowances received from the United States Public Health Service as will make his compensation equal to that paid the Health Officer of the District at the time of the passage of this Act.
>
> 'Except as otherwise expressly provided herein, the functions of the Health Department shall continue in accordance with existing law and Commissioners' regulations not inconsistent with the law.'

"Although it is stated that the Health Officer will be 'under the general supervision and control of the Commissioners of the District,' the provision, 'that the President of the United States is authorized to designate from among the officers of the United States Public Health Service Corps an officer who shall become the Health Officer of the District,' makes it apparent that if this bill is enacted into law the Federal Government will exercise control over the local health situation.

"It is the belief of your Committee that the present organization of the District Health Department should in no wise be jeopardized. The Department, in the opinion of the Committee, will best serve the people of the District if it retains its present independent status. The Committee, therefore, recommends that this section of the bill be vigorously opposed as not being in the public interest."

The Executive Board considered these reports at length. It found in them elements of which it heartily approves and in principle the Board endorses the recommendations made by both Committees.

In regard to the proposal to federalize the District Health Department, your Board wishes to register its opposition. It believes that the contemplated changes should be combated with all means at the Society's command as not being in the interest of this community.

The Medical Society has long recognized the need for an efficient Health Department. Evidence of this fact is the Society's active leadership in health matters and the support it has given the local Health Department on many occasions. No one knows better than physicians that an effective public health program is dependent on the coöperation given by the medical profession, and that only to the degree that there is a harmonious relationship between the Health Department and private medical practitioners will there be worthwhile accomplishments.

The Executive Board believes that the present situation demands that definite action should be taken by the Society, because of the Society's responsibility to the public in matters of health. It, therefore, submits the following resolution for adoption:

> WHEREAS, The Medical Society of the District of Columbia has consistently urged the need for an adequate public health program in the District and has on a number of occasions given leadership and support to public health movements; and
>
> WHEREAS, The Medical Society supports the view of its Committee on Public Policy that "the present organization of the District Health Department should in no wise be jeopardized" and that it should retain "its present independent status." Furthermore, it views with disfavor the enactment of a law which would deprive the local community of a voice in the selection of a Health Officer, and which does not conserve the principle that the Health Officer's primary allegiance should be to the citizens of the District of Columbia; and
>
> WHEREAS, The present Health Officer, Dr. George C. Ruhland, was, after careful consideration, recommended for appointment to the office which he now holds by representatives of the medical and allied professions as the ablest available health official; and
>
> WHEREAS, The Medical Society has never had occasion to question the competency of the present Health Officer and is, therefore, in agreement with the Committee on Public Health that he has given the District "an able, efficient and modern administration" of his Department;
>
> BE IT THEREFORE RESOLVED, That the Medical Society of the District of Columbia opposes any method of selecting or appointing a Health Officer for the District of Columbia which violates the principle that he should be a representative of and primarily responsible to the citizens of the District of Columbia,
>
> AND BE IT FURTHER RESOLVED, That on the basis of his record and accomplishments, Dr. George C. Ruhland should be retained as Health Officer and given the endorsement of the Medical Society of the District of Columbia.

MEETINGS

Wednesday, March 6: Business meeting.

Wednesday, March 13: The Obstetrical Board will present the following program:

"Maternal Mortality in Washington for the First Two Years of the Study" (first report), Herbert P. Ramsey, M.D., Chairman.

Round Table by the Board members and general discussion will follow this report.

Wednesday, March 20: Joint meeting with the Montgomery County Medical Society.

Frank H. Lahey, M.D., F.A.C.S., Director of the Lahey Clinic, Boston, will speak on the subject, "Modern Diagnosis and Management of Thyroid Disease."

Wednesday, March 27: The Section on Pathology and Laboratory Medicine will present a Panel Discussion on Clinical Laboratory Procedures of Interest to the Physician:

"What to Do with the Continued Undiagnosed Fevers," Janvier W. Lindsay, M.D.

"What to Do with the Patient Suffering from Chronic Diarrhea," Roger M. Choisser, M.D.

"What to Do with the Coma Patient," Lester Neuman, M.D.

"What to Do with the Patient Having Albumin in the Urine," Harold E. Ragle, M.D.

"What to Do with the Jaundiced Patient," Oscar B. Hunter, M.D.

"What to Do with the Patient with Enlarged Lymph Glands," V. J. Dardinski, M.D.

Dr. George J. Brilmyer will act as mediator. Questions from the audience will be invited.

Wednesday, April 10: The Washington Heart Association will present a lecture by Hugo Roesler, M.D., Associate Professor of Radiology, Temple University School of Medicine, Philadelphia. Dr. Roesler, who has an international reputation as roentgenologist of cardiovascular disease, has chosen for his subject, "Some Roentgenological Aspects of Cardiovascular Disease."

NEWS AND PERSONALS

The American Association for the Study of Goiter will hold its next annual meeting at Rochester, Minnesota, April 15, 16, and 17, 1940. The program for the three-day meeting will consist of papers dealing with goiter and other diseases of the thyroid gland; dry clinics conducted by guests of the Association; and operative clinics conducted by the Staff of the Mayo Clinic.

The Association is again offering the Van Meter Prize Award of $300 and two honorable mentions for the best essay submitted concerning original work on problems related to the thyroid gland. The award will be made at the time of the annual meeting provided essays of sufficient merit are presented in competition.

The competing essays may cover either clinical or research investigations; should not exceed three thousand words in length; must be presented in English; and a typewritten double-spaced copy sent to the Corresponding Secretary, Dr. W. Blair Mosser, 133 Biddle Street, Kane, Pa., not later than March 15.

The Eighth Annual Postgraduate Clinic of the George Washington University School of Medicine will be held on Friday and Saturday, February 16 and 17. For the first time this year the clinics are occupying two days instead of one as in the past due to the volume of new material in the progress of medical science. Below is a partial list of papers to be presented:

"Present Day Trends in Medical Education," Walter A. Bloedorn, M.D.
"Recent Advances in Bacteriology and Immunology with Special Reference to Tuberculosis among Medical Students," Leland W. Parr, Ph.D.
'Sulfanilamide—Its Nature and Theory of Action," George B. Roth, M.D.
"Incomplete Rupture of the Aorta and Its Clinical Effects," Thomas M. Peery, M.D.
"Laboratory Diagnosis of Subvitaminosis 'C'," Joseph H. Roe, Ph.D.
"Present Status of Water Metabolism," Errett C. Albritton, M.D.
"Recent Results in Tissue Transplants," George B. Jenkins, M.D.
"Some Recent Advances in the Biochemistry of Malignant Tumors," Helen M. Dyer, Ph.D.
"Cesarean Section," Alfred C. Beck, M.D., Brooklyn, N. Y.
"Pelvic Infection," Willard Richardson Cooke, M.D., Galveston, Texas
"Multiple Pregnancy," John Cooke Hirst, M.D., Philadelphia, Pa.
"Medicine's Role in Social Experiments," Mr. Theodore Wiprud
"Cardiac Surgery," Charles Stanley White, M.D.
"Recent Advances in Genito-Urinary Surgery," Frederick A. Reuter, M.D.
"Newer Methods in the Treatment of Fractures," Custis Lee Hall, M.D.
"Surgical Anesthesia," Francis G. Speidel, M.D.
"Discussion of the Etiology of Sprue," Edward B. Vedder, M.D.
"Intradermal Vaccination, with Cultured Virus (Rivers) and with Calf Lymph Virus Compared," Harry H. Donnally, M.D.
"Recent Advances in Peripheral Vascular Diseases," Paul F. Dickens, M.D.
"Hormonal Treatment of Gastrointestinal Disease," William J. Mallory, M.D.
"Clinico-Pathological Conference," Roger M. Choisser, M.D., and Walter A. Bloedorn, M.D.

All the meetings will be held in Hall A, first floor of the School of Medicine at 1335 H Street, N.W.

The Annual Banquet of the George Washington University Medical Society will be held Saturday evening in the Ballroom of the Mayflower Hotel. At that time the Class of 1920 will hold its twentieth annual reunion.

The District Works Projects Administration is conducting a six weeks' Health Institute to provide instruction in the essential facts of every-day health problems for 3,700 employees of its professional and service divisions. The meetings are held in the auditorium of the National Museum at Constitution Avenue and Tenth Street, N. W. Coöperating with the WPA are the District Health Department, the Speakers' Bureau of The Medical Society of the District of Columbia and the Medico-Chirurgical Society. Mrs. Chleo B. Spencer, Health Consultant of the District WPA, is in charge of the Institute.

In response to requests made by the Speakers' Bureau, the following members have taken part in the Institute:

"Common Colds and Pneumonia"

January 15	Dr. John R. Cavanagh
January 18	Dr. Harry F. Dowling
January 19	Dr. Theodore J. Abernethy

"Child Welfare: Common Diseases of Childhood"

January 29	Dr. William A. Howard
January 31	Dr. Robert A. Bier
February 2	Dr. Charles A. Millwater
February 2	Dr. Margaret Nicholson

"Maternal Welfare"

January 29	Dr. Samuel M. Dodek
January 31	Dr. Radford Brown
February 2	Dr. Bernard Notes
February 2	Dr. Russel J. Jansen

"Cancer"

February 7	Dr. Joseph Horgan
February 9	Dr. William B. Marbury
February 9	Dr. J. Rogers Young

"Care of the Eyes"

February 12	Dr. Frank D. Costenbader
February 14	Dr. Ronald A. Cox
February 16	Dr. Joseph Dessoff
February 16	Dr. Benjamin Rones

Doctors' Hospital is progressing very satisfactorily in spite of the city-wide strikes during last spring and summer. The building contractor expects to turn the hospital over to the management about February 10. However, the Hospital will not be open for patients until about February 25. In the meantime, the institution will be thoroughly equipped, organized and all employees instructed in their duties before patients are admitted. It is expected two days will be set aside for inspection of the hospital by the medical, dental and nursing professions and also for certain public officials and others who are interested in the project. No special arrangements have been made for a formal opening but the Administrator has arranged to take visitors through in groups from the solarium on the roof to the kitchen in the basement and to explain as far as possible the professional operation of a hospital.

The Section on Ophthalmology and Otolaryngology met January 19 and presented the following program: "Speech Defects and Their Correction," Dr. Richard Hutcheson, Professor of Speech and Speech Correction, University of Maryland; and "The Waldeyer Ring," Dr. John Trinder.

The Section on Pediatrics met on January 25 and presented the following program: "Formalinized Vaccinia Virus; Results of Its Use with Children Who Had Never Previously Been Vaccinated," Dr. H. H. Donnally and Dr. A. J. Weil; "Congenital Heart in Childhood," Dr. Margaret M. Nicholson; "Congenital Cardiac Abnormalities Simulating Thymic Stridor and Related Disorders," Dr. Charles A. Schutz.

The Washington Gynecological Society held a joint meeting with the Obstetrical Society of Philadelphia in Washington on January 18, 1940. The morning program consisted of four panel discussions on the following subjects: "Obstetrical Analgesia and Anesthesia," Dr. Howard F. Kane, Leader; "Induction of Labor, Indications and Methods," Dr. Prentiss Willson, Leader; "Hysterectomy—Total vs. Subtotal," Dr. E. W. Titus, Leader; "Sterility, Diagnosis and Treatment," Dr. Herbert P. Ramsey, Leader.

The afternoon program consisted of field trips and the following institutions were visited: National Cancer Institute, Warwick Memorial Clinic of Garfield Memorial Hospital, Gallinger Municipal Hospital, and the District Health Department Clinic.

The meeting closed with a dinner at the Hotel Mayflower with the President, Dr. Herbert P. Ramsey, presiding. Speakers were Dr. Thomas B. Lee of Camden, New Jersey, president of the Obstetrical Society of Philadelphia, Drs. G. M. Laws, Clifford B. Lull, Norris W. Vaux and Sidney Dunne of Philadelphia, J. H. Underwood of Woodbury, N. J., and Dr. Fred B. Nugent of Reading, Pa.

The next regular meeting of the Washington Gynecological Society will be held Saturday, March 23, at the Mayflower Hotel.

The Washington Society of Pathologists met at the Army Medical Museum January 6, 1940, at which time formal presentations were made as follows: "Tumor of the Sacrococcygeal Region," Dr. H. E. Ragle; "Carcinoma of Esophagus; Early Carcinoma of Larynx," Dr. J. W. Lindsay; "Axillary Tumor," Dr. Oscar B. Hunter; "Brain Tumor," Dr. W. W. Hurteau. Informal presentations were made by Drs. Thomas Peery and Oscar B. Hunter.

The next meeting will be held March 2, 1940.

The Washington Medical and Surgical Society met January 22. Dr. Philip O. Pelland presented a paper entitled, "Non-Union: Its Cause and Treatment." Case reports were made by Drs. Howard Parker and Joseph J. Greenlaw.

The next meeting will be held at the Kennedy-Warren on February 26. Dr. George H. McLain will give the paper of the evening and Dr. James Alexander Lyon the case report.

The Women's Medical Society of the District of Columbia held their January meeting at the home of Dr. Mary Holmes. Dr. Petrena Abbe Shea spoke on "Recent Advances in Gynecology and Obstetrics."

The February meeting was held at the home of Dr. Edith SeVille Coale. Dr. Ella M. A. Enlows gave a talk on the subject, "Ear, Nose, and Throat in Relation to General Medicine."

The Washington Academy of Surgery meets four times during the year and has presented the following programs:

At the October meeting, Dr. Charles C. Higgins of the Cleveland Clinic addressed the Academy on "The Transplantation of the Ureters into the Rectosigmoid and Cystectomy." At the December meeting, an address was given by Dr. Louis R. Davidson of New York entitled "Pneumonectomy in Man." Dr. Daniel Elkin of Atlanta, Georgia spoke February 9 on the subject, "Emergency Surgery of the Heart."

The last meeting of the year, which has been set for April 12, will be devoted to case reports by members and to the election of officers.

The Social Hygiene Society issued a call for representatives from every venereal disease clinic in Washington to meet December 7, at which time they organized the Special Committee on Clinic Coördination and Management. Among the thirty who attended were chief clinicians, heads of medical social service and public health nursing, statisticians, and others active in the administration of the District's venereal disease control program. The objectives of this committee are to provide a liaison channel for the exchange of viewpoints between public and private agencies and to promote greater efficiency in clinic services.

Dr. George W. Creswell was elected chairman for 1939–40.

The Syphilis Journal Club of Washington held its regular bi-monthly meeting on December 8 at the home of Dr. Russell J. Fields. A review of foreign literature was given by Commander R. P. Parsons, (MC) U.S.N., and papers were contributed by Dr. Noka B. Hon, Past Assistant Surgeon, U. S. Public Health Service, and Jesse P. Porch, Serologist, District Health Department.

On February 2 the following program was presented at the home of Dr. H. D. Shapiro: "Review of Ocular Syphilis. Archives of Ophthalmology," Dr. Ernest Sheppard; "Interesting Facts Appearing in the Archives of Dermatology and Syphilology," Dr. L. Keith MacClatchie; "Observations in Medical Social Service," John A. Chappelear, B.S., and Edith L. McCoy, M.S.

The Jacobi Society will present the following program on February 19: "Pruritus Vulvae," Dr. David Kushner; "Chronic Otorrhea," Dr. Joel Novick.

The following program is scheduled for March 18: "Modern Physical Therapy in Cardiovascular Disease," Dr. Isadore Levin; "Significance of the Velocity of Blood Flow in Medicine," Dr. Benjamin Manchester.

The Washington-Baltimore Psychoanalytic Society held a meeting February 10 at the Shoreham Hotel. Dr. Harry Stack Sullivan gave an address on "Treatment of Schizophrenia."

The George Martin Kober Medical Society held its regular monthly meeting January 15. Dr. Hugo Einstein gave an essay entitled, "Evidence of Primitive Surgery." The case report was given by Dr. G. Victor Simpson on the subject, "Moving Picture on Contact Glasses."

The Medical Society of St. Elizabeths Hospital will hold its Third Annual Scientific Meeting at the Hospital on April 20. Several papers will be presented by members of the Society. A banquet will be held the same evening in Washington.

The George Washington University School of Pharmacy was included on the first list of schools to be accredited by the Council on Pharmaceutical Education. The Council has accredited fifty-eight institutions after a two years' study.

The Pharmacy School at George Washington University is sixth oldest in the nation. It was founded in 1867 by the Apothecaries Association of the District. In 1872 it opened as a national College of Pharmacy and in 1906 it affiliated with the University.

The Jewish Social Service Agency announces the appointment of the following physicians to its medical staff to care for indigent sick persons, each to serve for a period of two months:

Drs. Harry Orleans, Paul Wilner, Harry Douglas, Morris Chase, Benjamin Lafsky, Samuel Dessoff, Abe Blajwas, Herman Eisenberg, William Raffel, and Irving Burka.

The following consultants were appointed to serve for the year in their field of specialty:

Drs. Murray Robinson, Reuben Goodman, Samuel Luber, Siegfried Speyer, Joseph Harris, Julius Neviaser, Milton Greenberg, Arthur Nachlas, David Weinstein, Isadore Levin, Joseph Dessoff, Samuel Machlis, Alec Horwitz, Gilbert Ottenberg, Isadore Rodis and Sollie Katzman.

The Smith-Reed-Russell Society inducted twenty-nine George Washington University medical students into membership January 9. Dr. Winfred Overholser and Dr. Thomas Martin Peery were made honorary members.

Dr. William H. Hough discussed "The Need for Birth Control" at a luncheon meeting of the Mothers Health Association, January 16.

Dr. LeRoy A. Wilkes, Executive Officer of the Medical Society of New Jersey, who was in attendance at the White House Conference on Children in a Democracy, called at the Society's Office on January 17.

Dr. A. B. Hooton has resigned his post as Health Officer of Prince Georges County to take a county health officership in South Carolina. He was succeeded by Dr. Charles E. Gill, formerly District Health Officer in the Department of Public Health of Massachusetts.

Dr. Winfred Overholser discussed "Mental Problems of the Aged" January 15 before the Institute on Problems of the Aged held under the auspices of the Washington Council of Social Agencies at the Y. W. C. A.

BOOK REVIEW

Manual of Urology. Ralph M. LeComte, M.D., F.A.C.S., Professor of Urology, Georgetown University School of Medicine; member of the American Urological Association. Ed. 2, completely rewritten. Price, cloth, $4.00. Pp. 295, with 55 illustrations. Baltimore: Williams & Wilkins Co., 1939.

This volume is presented by the author to bring up to date his original volume. The material is presented very clearly and concisely and is admirably adapted for the purpose it was intended to accomplish. The subjects of physiology, chemotherapy and mechanical procedures which are changing so rapidly are treated. The problem of sterility is handled very soundly and in keeping with recent contributions.

The physician who wants to review the subject of urology with the least confusion and minimum expenditure of time would appreciate this volume.

W. P. H.

(*Continued from page 47*)

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11. Gull, W. W.: Clin. Soc. Trans., 1874, **7,** 22.
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13. Chatagnon, P., and Scherrer, P.: Presse méd., 1939, **47,** 1277.
14. Simmonds, M.: Deutsche med. Wchnschr., 1914, **40,** 322.
15. Sheldon, J. H.: Lancet, 1937, **1,** 369.
16. Bruckner, W. J., Wies, C. H., and Lavietes, P. H.: Am. J. M. Sc., 1938, **196,** 663.
17. Pardee, I.: Unpublished personal report.
18. Scott, C. C., Scott, W. W., and Luckhardt, A. B.: Am. J. Physiol., 1938, **123,** 248.
19. Brigham, A.: An Inquiry Concerning the Diseases and Functions of the Brain, the Spinal Cord and the Nerves. 1840.

MEDICAL SOCIETIES WITH LIMITED MEMBERSHIP

WASHINGTON, D. C.

1939–1940

SOCIETY	PRESIDENT	SECRETARY	NO. MEETINGS PER YEAR	DATE OF MEETINGS	PLACE OF MEETING
Aesculapian	H. P. Parker	F. C. Allman	12	1st Tuesday	
Association of Medical Fellows of Georgetown University	E. R. Fenton	J. A. O'Donoghue	16	2nd & 4th Tuesdays	
Baltimore-Washington Dermatological	F. A. Ellis	I. L. Sandler	8	3rd Thursday	Alternating Baltimore and Washington
Clinical Club	W. P. Herbst, Jr.	H. S. Bernton	8	1st Tuesday	Cosmos Club
Clinico-Pathological	H. G. Fuller	H. L. Darner	14	1st & 3rd Tuesdays	
George Washington University	Arnold McNitt	L. H. French	8	3rd Saturday	G. W. U. Schl. of Med.
Georgetown Clinical	J. R. Costello	J. F. Rogers	8	3rd Tuesday	University Club
Georgetown University Alumni Club	L. B. Norris	H. F. Davies	2	On call	
Hippocrates-Galen	A. B. Coulter	R. R. Rathbone	8	1st Thursday	
International Medical Club	Lee McCarthy	P. S. Constantinople	—	On call	Mayflower Hotel
Jacobi	Maurice Protas	Isadore Rodis	8	3rd Monday	Roger Smith Hotel
Kober	W. M. Ballinger	Don S. Knowlton	8	3rd Monday	Columbia Country Club
Mackall	P. W. Gard	G. W. Ault	7	3rd Thursday	Kennedy-Warren Apts.
Medical Arts	S. O. Foster	M. W. Glover	7	2nd Thursday	University Club
Osler	E. M. McPeak	T. J. Abernethy	8	3rd Monday	
Pan American (D. C. Branch)	J. A. Lyon	A. A. Moll	4	Sunday	
Saint Elizabeths Hospital	W. W. Eldridge	M. B. Pettit	2	On call	St. Elizabeths Hospital
Syphilis Journal Club	W. H. Hough	G. W. Creswell	5	1st Friday*	
Virginia, Maryland and District of Columbia	M. B. Hiden	J. R. Young	2	3rd Wednesday (May & Nov.)	Alternating Va., Md. & D. C.
Washington Academy of Medicine	Karl Voegtlin	E. C. Albritton	3	On call	Cosmos Club
Washington Academy of Surgery	F. R. Hagner	J. O. Warfield, Jr.	4	2nd Friday*	
Washington-Baltimore Psychoanalytic	Frieda Fromm-Reichmann	D. M. Bullard	8	2nd Saturday	Shoreham Hotel, Wash.* Belvedere Hotel Baltimore†
Washington Gynecological	H. P. Ramsey	J. R. Costello	5	4th Saturday‡	Columbia Country Club
Washington Heart	John Minor	B. W. Leonard	3–4	On call	
Washington Institute of Internal Medicine	L. C. Ecker	C. R. L. Halley	—	On call	
Washington Medical and Surgical	Beveridge Miller	T. C. Thompson	7	4th Monday	Kennedy-Warren Apts.
Washington Ophthalmological	Ernest Sheppard	E. L. Goodman	4	1st Monday†	Episcopal Hospital
Washington Society of Pathologists	H. E. Ragle	Lt. Col. V. H. Cornell	8	1st Saturday	Army Medical Museum
Washington Urological	R. M. LeComte	I. A. Pelzman	6	Monday—every 6 weeks	Hay-Adams House
Women's Medical	Lillian Malone	Carolyn Pincock	8	1st Tuesday	

* October, December, February, April.

† November, January, March, May.

‡ October, November, January, March, May.

Note: Most of these societies begin their regular meetings in October and continue through May.

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METHODS FOR MEASUREMENT OF PRESSURES IN THE ANTECUBITAL AND POPLITEAL VEINS DURING EXERCISE*

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AND

HUGH HUDSON HUSSEY, M.D.
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Measurement of the blood pressure in the veins of the extremities is widely used for diagnosis in a variety of cardiovascular diseases, especially congestive heart failure. However, the procedure has obtained comparatively slight clinical application in the diagnosis and study of lesions of the peripheral veins themselves. This is somewhat surprising in view of the fact that conditions such as thrombosis, phlebitis, local venous obstruction from tumors or other causes, and varicose veins are so common.

The value of measurement of the venous pressure in differentiating edema due to lymphatic obstruction from that due to venous obstruction was clearly shown by one of us in the study of cases of edema of the arm following radical mastectomy.[1] However, in some cases of this type in which the edema can be demonstrated by means of venograms to be due to obstruction of veins, the venous pressure taken in the usual way is within normal limits in the affected extremity. This finding, coupled with the observation that edema in such cases is increased by exercise and diminished with rest of the affected arm, can be explained only by the assumption that a collateral venous circulation has developed which is adequate under conditions of rest but grossly inadequate during exertion.

In the same way, in cases of unilateral or bilateral edema of the lower extremities it may be difficult to determine the cause of the edema. Very much the same conditions may obtain in the case of the lower extremity as have been described for the upper extremity. Measurement of the pressure in the femoral vein or a superficial vein may give normal results under basal conditions although the femoral or iliac vein is partly obstructed. This is especially true in conditions in which the degree of obstruction varies according to the position of the patient, as for example in compression of the pelvic veins by a tumor. Furthermore, measurement of the pressure in a vein of the lower extremity while the patient is upright is difficult to interpret, since such a measurement cannot be expressed in terms which take into consideration the position of the right auricle without wide discrepancies resulting.

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* From the Surgical Service, Gallinger Municipal Hospital, and the Department of Medicine, Georgetown University School of Medicine.

Therefore, a test is needed which will show the changes in venous blood pressure during exercise of the arm, if accurate information is to be obtained as to the presence and degree of venous obstruction. It is to be assumed that the same kind of test with appropriate modifications would have a similar usefulness in the case of the lower extremity. With these facts in view, we have devised the following simple tests.

THE "EXERCISE TEST" IN THE UPPER EXTREMITY

Method.—Direct measurement of the pressure in one of the antecubital veins is easily accomplished. The method used in these present studies is essentially that of Griffith, Chamberlain and Kitchell.[2, 3] In accord with recent work[4] it has been modified so that the reference point for the zero level of the saline manometer is a point 10 cm. from the skin of the patient's back. This point closely approximates the position of the right atrium, and with this technic the antecubital venous pressure normally ranges from 50 to 150 mm. of saline.

When the basal venous pressure has been determined and while the apparatus is still in use, a roll of bandage is placed in the patient's hand on the same side in which the measurement is being taken. The patient is told to close and open his hand, squeezing the bandage tightly with each contraction and relaxing completely when the hand is open. This is continued for one minute, during which the patient usually will have clenched his fist 30 to 40 times. It is important to instruct the patient to restrict his exertion to the arm and to try to continue breathing regularly and evenly.

In some cases of obstruction of the axillary and subclavian veins, the venous pressure may rise so high during the exercise test that it cannot be recorded conveniently with the saline manometer. In such cases it is possible to use an apparatus which allows the substitution of a mercury manometer by means of a three-way stopcock. In making readings during the exercise test, if it is found that the venous pressure is rising too high for measurement by the saline manometer, the lever of the stopcock is turned so that the pressure is measured in terms of millimeters of mercury while the exercise continues. Later this measurement can be easily translated into millimeters of saline.

THE "EXERCISE TEST" IN THE LOWER EXTREMITY

For purposes of measuring the venous pressure in the lower extremity during exercise, a deep vein should be used. The superficial veins are too strongly affected by muscular contraction and are too variable in size and location. In fact, superficial veins may be invisible when the lower extremity is markedly edematous. We have found the popliteal vein to be well suited for the test.

The popliteal vein is formed by the junction of the anterior and posterior tibial veins at the lower border of the popliteus muscle. It receives the lesser saphenous vein and a few minor tributaries. It is about the size of the axillary vein and is of course fully distended when the individual is standing. It can be easily punctured for venous pressure studies if careful attention is paid to certain anatomic landmarks. The vein lies superficial to the popliteal artery and medial to the tibial nerve. The upper third of the vein is covered by the semimembranosus and semitendinosus muscles and the lower third by the gastrocnemius muscle. In the middle third it is most superficial, being covered only by the deep fascia, subcutaneous tissue and skin. This part of the vein is most accessible for venipuncture and particularly for performance of the exercise test, because a needle inserted into the vein at this point will not be affected by contraction of the muscles.

Method.—The apparatus for measurement of the popliteal venous pressure consists of a mercury U-tube manometer, one arm of which is straight, the other arm bent at an angle to facilitate attachment of a piece of rubber tubing. A millimeter scale is affixed beside the straight arm for purposes of recording pressures. Measurements obtained on this scale of course must be doubled in order to represent true records of pressures in terms of millimeters of mercury. The other arm is filled completely from the surface of the column of mercury to its tip with 2.5 per cent sodium citrate solution. The height of the column of mercury beside the millimeter scale is noted. Next a sterile length of rubber catheter tubing having a needle adaptor in one end is filled completely by means of a sterile 5 c.c. syringe with sterile 2.5 per cent sodium citrate solution. This tubing is clamped with a small hemostat and its free end is then slipped on the designated arm of the manometer, care being taken to exclude air bubbles from the system. The manometer is adjusted on its supporting stand so that the zero level of the column of mercury is on a plane with the point at which the venipuncture is to be made. This adjustment is accomplished by using a carpenter's level.

The patient is instructed in the procedure of the test and is shown how to perform the exercise. He stands erect, with feet slightly apart, on a smooth table set against the wall, where supports are provided for his hands. The lower half of the thighs and the legs are exposed, shoes and stockings being removed. Standing behind the patient, the operator palpates the lower border of the patella with his index finger, and locates with the thumb of the same hand a point on this same level and just medial to the lateral head of the gastrocnemius and the plantaris muscles. After appropriate sterilization of the skin, a wheal is produced at this point with one per cent solution of novocaine. A 19-gauge, $1\frac{1}{2}$-inch needle, attached to a 5 c.c. syringe is inserted through the anesthetized area and is pushed straight forward until the popliteal vein is punctured. During the insertion of the needle, traction is exerted upon the plunger of the syringe so that entrance of the needle into the vein can be instantly recognized by the spurt of dark red blood into the syringe. The depth to which the needle must be inserted varies somewhat in different individuals but usually is about 2.5 cm. The patient is warned that he may experience a shock of pain radiating down his leg. He is cautioned not to move his leg but to inform the operator of the discomfort. This happens not infrequently and is caused by pricking the tibial nerve which lies close to the lateral surface of the vein. The pain is only momentary and guides the operator for reinsertion of the needle slightly more medially. When the popliteal vein has been entered the syringe is detached from the needle, and the adaptor of the venous pressure apparatus is connected to the needle. Loss of a small amount of blood is unavoidable during this transfer. Finally, the clamp is removed from the tubing of the apparatus.

The column of mercury in the manometer will quickly come to a level which indicates the local blood pressure in the vein. The height of this level is recorded as the initial venous pressure. The patient then begins the exercise which consists in rising on his toes repeatedly (20 to 30 times) for one minute. It is important that he use the wall supports for his hands only for the purpose of steadying himself and not as a means of assisting the exertion, that he breathe regularly during the exercise, and that he relax the muscles of his legs each time his heels are lowered to the surface of the table. During the test it is necessary for the operator to support the rubber tubing of the apparatus with his hand in order to keep the needle horizontal and prevent it from slipping. The changes in venous pressure during exercise are recorded, and the pressure is observed for a short time after exercise has ceased. The needle is then withdrawn and firm pressure is applied for about a minute at the site of venipuncture. The patient is required to walk around the room for a few minutes at the conclusion of the test in order to minimize the likelihood of venous thrombosis.

Discussion

The exercise tests during measurement of the venous pressure have been applied in a large group of patients. The findings are expected to form the basis for a later report on the clinical application of the tests. In normal individuals, in patients with heart failure, and in those with edema due to causes other than venous obstruction the exercise tests have no significant effect upon the initial venous pressure. In cases of localized venous obstruction by thrombosis or compression, a significant rise in the venous pressure occurs during performance of the exercise tests. Probably the amount of rise, the rapidity with which it occurs, and the time required for the venous pressure to return to its initial level depend upon the degree of venous obstruction and the efficiency of the collateral circulation.

Summary

A description has been given of simple tests which permit the measurement of "general" venous pressure in the antecubital vein or of "local" venous pressure in the popliteal vein during exercise. These tests should be of value in the differentiation of localized venous obstruction from other conditions causing edema or an elevation of the venous pressure.

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"Ophthalmia Neonatorum in the District of Columbia"*

What is the present status of ophthalmia neonatorum in Washington? The District of Columbia Society for the Prevention of Blindness has recently surveyed five hospitals for cases occurring during the years 1933–1938. Ophthalmia neonatorum was considered to be any inflammation of the eye occurring within 14 days after birth. As a result of a study of more than 27,000 births, of which approximately two-fifths were colored and three-fifths white, 265 cases were located, of which 240, or 90 per cent were colored, and 25, or 10 per cent were white. Three hospitals with large white maternity service were either unwilling to make their records available or through lack of index were unable to supply them; otherwise cases for white infants presumably would be more numerous.

Hospital B with half as many colored births as Hospital A showed two and one-half times as many cases among colored infants as Hospital A. The most obvious difference between the two hospitals is that A used silver nitrate prophylaxis, whereas B employed argyrol.

Infants contracting the eye infection were about evenly divided according to sex.

Twenty-five per cent of the cases were caused by the gonococcus; 27 per cent by some other organism (pneumococcus in 9 per cent) and in 48 per cent there was no statement of etiology.

Twenty-three per cent of the ophthalmia neonatorum cases left the hospitals before cure was established.

The highest rate of incidence discovered was 3.89, or approximately one case per 25 births; the lowest was .029 or 1 case per 3,413 births, at a hospital which employed careful technic in administering prophylaxis.

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* Abstract of a paper filed with Dr. George C. Ruhland by the District of Columbia Society for the Prevention of Blindness.

A TRACTION-MANIPULATION TREATMENT OF "STIFF NECK"

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The "stiff or painful neck" is a common condition the treatment of which can often tax the ingenuity of a physician. The patient is very uncomfortable, has a great deal of pain and not only holds the head and cervical spine rigidly but often tilted. It is quite essential that some form of treatment be given which will relieve the patient of his acute symptoms. Failure to accomplish some immediate good drives many of these sufferers to seek relief from the allied manipulative professions or cults, sometimes with results that put the medical profession to shame.

For the past eight years I have been using the traction-manipulation treatment for stiff and painful necks and have observed the facts mentioned in this paper.

Types of Cases Treated

Roentgenograms are always made in the course of the examination to rule out a fracture or dislocation of the cervical spine as well as any organic disease of the vertebrae, such as tuberculosis, since this method of treatment is applied to only three groups of cases: (1) the traumatic type, (2) chronic arthritis, and (3) the muscular type.

1. The traumatic cases in which the roentgenogram is negative are the ones which fall under the method of treatment to be described. Many of these cases are due to a minor subluxation in the cervical spine. A study of the anatomy of the cervical spine has shown that it is possible to have a slight subluxation of the intervertebral articular facets in the transverse plane which will not show by X-ray either in the anterior-posterior, lateral or oblique views. The intervertebral joints of the cervical spine are particularly liable to injury due to the wide range of leverage acting on them. This stiffening of the neck occurs not infrequently because of the minor subluxation in this region following an injury or due to muscle strain, the subsequent muscle spasm producing the mild subluxation. Whether the patient's condition is the result of the direct subluxation or a subluxation following continuous muscle spasm, the treatment is directed toward overcoming both conditions.

2. Chronic arthritis of the cervical spine may be local or a manifestation of a generalized arthritis. The reflex spasm which gives pain and limitation of motion is helped by this traction-manipulation method by overcoming muscular contraction and separating the joint spaces. However, it has been found that this group of cases responds more slowly to treatment than the other types. This is probably due to the fact that the condition is an inveterate one and the symptoms are never poignant.

One should proceed with some measure of caution in handling cases of arthritis of the cervical spine. When the roentgenogram reveals marked hypertrophic changes, such as osteophytic outgrowths or ligamentous calcification, the manipulations while the patient is in head traction should be done slowly and steadily. Those who have not had enough experience in handling cases of this type should be sufficiently aware of the danger of quick or vigorous manipulations.

3. Myositis or fibrositis of the trapezius, sternocleidomastoid, splenii or scaleni muscles may be due to exposure to cold, muscle strain from posture or trauma (previously mentioned), or the result of an infectious process such as diseased tonsils or teeth. This treatment is very beneficial in these cases, but if a focus of infection is present it should be removed after the acute torticollis has subsided. Taking care of this etiologic factor will go a long way in preventing future attacks of this condition.

Method of Treatment

After the examination and diagnosis have been made, treatment is directed to giving the patient immediate relief of the acute symptoms. This consists of:

1. Infra-red heat to the back and sides of the neck while an ointment is being massaged continuously and lightly into the spastic muscles for 5 minutes. In the past two years I have been using a histamine compound in the preliminary massage of the neck because this drug by increasing local circulation seems to aid in overcoming muscle spasm. After the massage the heat is continued for 20 minutes more.

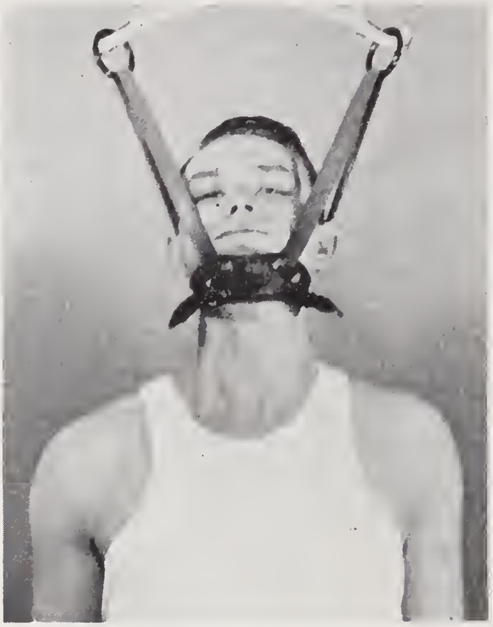

Fig. 1. Patient in head traction ready for the manipulations. Notice the spastic sternocleidomastoid muscle on the right side.

2. Following this, head traction is used. The head is placed in a halter and the patient then stands on his tiptoes. Traction is applied by pulling on a rope running through an overhead pulley, taking up the slack, and then allowing the patient to come down gradually until his heels just barely touch the floor (fig. 1).

3. The head traction is maintained for a few minutes, after which time the spastic muscles can often be felt losing their tightness. With the traction rope now held by the office assistant the head is turned in the direction away from the involved muscles to further overcome the spasm. For example, if the patient has a stiff and painful neck on the right side, the right trapezius or sternocleidomastoid may be tight, the head tilting to the right. After head traction has been applied the head is gradually rotated to the left and held in that position for about a half minute (fig. 2). If the patient has too much discomfort or pain on the performance of this manipulation the head is held in maximum rotation only a few seconds. While rotating the head to the point where the chin points toward the shoulder a definite click or snapping is often heard. Whether this is due to the replacement of the mild subluxation, the breaking up of minute adhesions, or the normal adjustment of the joint surfaces to this extreme rotation I am unable to state. Generally the presence of this click is synchronous with the point of maximum rotation by manipulation. Allow the head to return to the straight position.

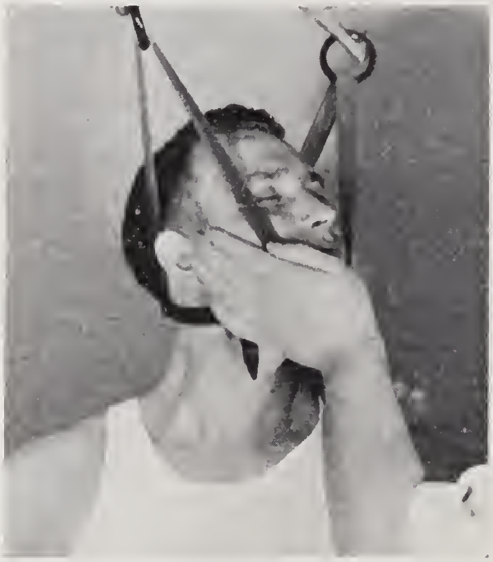

Fig. 2. Manipulation to the left to overcome spasm on the right side. This increases the rotatory and lateral flexion motions of the cervical spine.

4. When extension of the cervical spine is limited, manipulation of the neck in forced hyperextension is now done. With one hand pushing forward at the level of the seventh

cervical vertebra the chin is forced upward and backward as far as possible with the traction still being maintained (fig. 3).

5. The head is then returned to the straight position and held in that manner for about 2 minutes, after which the traction is removed and the halter disconnected.

This treatment often gives the patient immediate relief of the acute symptoms, and those that do not respond fully at once usually do so after 2 or 3 such daily treatments. In many chronic cases, of weeks' or months' duration, in which the local pain may not be severe but the shortening of the muscles from continuous contraction results in a great deal of stiffness and some deformity, the patient is made to sleep in a head traction outfit with an initial weight of 2 pounds which is gradually increased to 5 pounds after a period of 2 to 3 weeks.

Hanflig[1] describes a similar method of treatment for shoulder girdle pain, but in this series of cases no patients were hospitalized but were always ambulatory, going about their usual duties. From an economic point of view this alone was a great advantage.

RESULTS

This method of treatment has been used for the past eight years. It was first tried in despair in a case of mild hypertrophic arthritis of the cervical spine associated with pain and stiffness which had had every form of conservative orthopedic care over a period of 3 years without relief. Treatment every third day gave this patient complete relief of pain with increased range of motion in 6 weeks. The patient was also made to sleep in head traction. Since that time a series of 76 cases of the types described have been treated, with complete relief in 54 cases, improvement in 19 cases, and failure in 3 cases. The 3 cases of failure were all in elderly females with marked hypertrophic changes in the cervical spine. The manipulations given them were also of the mild character. Two patients that were cured complained of pain in the suboccipital region, the cause of which could not be determined. In the acute cases relief was usually obtained in the first few daily treatments. In many of these, treatment was continued for about a week or ten days more, every third day, until the patient was entirely symptom free. In the chronic cases disappearance of the stiffness with increased range of motion in the cervical spine was obtained in from 3 to 6 weeks' time, with the treatment being given every third day.

During the period in which this treatment was being used, 5 cases of acute torticollis and 2 cases of the chronic type were seen but not included in this series because the patient either feared the use of the head halter or the general condition of the patient did not justify use of the head traction. They were treated by rest, local heat and massage to the neck. All of them responded to treatment slowly, the acute cases averaging 2 weeks and 3 days before the patients were symptom free, while in the chronic cases there was only a partial improvement after 3 months' treatment.

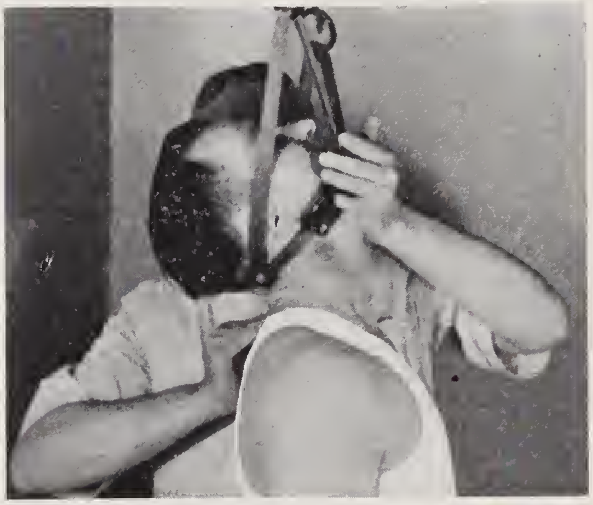

FIG. 3. Manipulation in hyperextension. This increases the range of flexion and extension of the cervical spine.

SUMMARY

1. Seventy-six cases of "stiff and painful neck" were treated by the traction-manipulation method.

(Continued on page 108)

TREATMENT OF STAPHYLOCOCCAL SEPTICEMIA WITH SULFAMETHYLTHIAZOL

REPORT OF A CASE WITH RECOVERY

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Staphylococcal septicemia has been defined by Kolmer[1] as an infection of the blood by staphylococci, their pathologic presence and products in the blood associated with infection of fixed tissues resulting in severe constitutional disturbances with signs of sepsis. The mortality from staphylococcal septicemia is very high, the staphylococcus being probably the most fatal organism causing general sepsis. In most large series of cases the mortality rate has varied from 75 to 90 per cent. The disease is most fatal in the very young, the aged, those having some complication such as diabetes mellitus, and in those having extension of the disease to the central nervous system, meninges or heart. Repeatedly positive blood cultures, especially when the blood contains a large number of colonies per cubic millimeter, almost invariably presage a fatal outcome.

The treatment of staphylococcal septicemia has been based on three primary principles: (1) immediate eradication of the source of the blood stream infection, (2) detection and eradication of metastatic foci when possible, and (3) sterilization of the blood stream.[2] In many cases, as in the one to be reported, either the first or second or both of the above procedures cannot be safely carried out. Recent developments have given us more potent weapons in the accomplishment of the third procedure. General supportive measures, in particular immune blood transfusions, are of the utmost value. A great variety of chemotherapeutic agents including mercurochrome, metaphen, gentian violet, acriflavine and neoarsphenamine have been used without striking results. Biologic agents such as staphylococcal antitoxin, staphylococcal toxoid and bacteriophage have not been as effective as had been hoped, although MacNeal and Frisbee[3] reported a mortality of 75 per cent in a series of 100 cases in which bacteriophage was used, this being considered a very low figure at that time.

The introduction of the sulfamido drugs has brought a ray of hope. Sulfapyridine[4, 5] and sulfathiazol have been found to exert a beneficial effect, although they are by no means so effective against staphylococci as against the streptococci, the pneumococcus and the gonococcus. Within the past year Uleron, 4-(4′ aminobenzenesulfonamido)-benzene sulfone dimethylamide, has been reported to have a much more specific action against staphylococci and has been used quite extensively abroad.[6] It has also been the subject of extensive clinical study in Washington by several members of the Medical Society of the District of Columbia and preliminary reports are favorable.

In November 1939 Herrell and Brown[7] reported experimental and clinical observations on the use of sulfamethylthiazol, a methylated derivative of sulfathiazol, in staphylococcal infections. They found it less toxic than either sulfapyridine and sulfathiazol and much more effective against staphylococci both experimentally and clinically in one case of staphylococcal septicemia with recovery. They recommended that the drug be used in dosage comparable to that of sulfapyridine. Since sulfamethylthiazol, and possibly the rather small amount of Uleron used, seemed to be the determining factor in the case to be reported, we wish to submit our observations in reference to its probable effectiveness.

Report of Case

J. O., a white male 15 years of age, was admitted to Gallinger Municipal Hospital on December 14, 1939 with complaints of severe pain in the middle of the back, chills and fever. The pain in the back had begun in the lower lumbar region, was gradual in onset, but had progressed in severity and was now felt as a constant dull pain localized to the region of the 10th dorsal vertebra; it was excruciating on motion of the spine. Chills and fever had accompanied the onset and on the day of admission the temperature had reached 104°F. There had been no headache, nausea, vomiting or urinary dysfunction. The systemic history was negative except as above. The past history was essentially negative except for the fact that for the preceding 6 months he had been subject to recurrent furuncles, having had 5, the last of which was a furuncle of the wrist first treated on November 24, 1939.

Physical examination showed a well developed and well nourished boy of 15, toxic, restless and flushed. The temperature was 103.8°F. and the pulse rate 132. There was a miliarial rash over the face and trunk. The head and neck were essentially negative. The chest was clear except for an occasional coarse bronchial râle; the heart showed no abnormalities. There was some voluntary splinting of the abdomen, but no areas of tenderness were noted; the liver, spleen and kidneys were not palpable. There was exquisite tenderness to even light pressure over the 10th dorsal vertebra and less marked tenderness over the adjoining 2 spinous processes, but no local redness or swelling was present. There was marked voluntary rigidity of the neck on attempted flexion due to severe pain referred to the lower dorsal region. Kernig's sign was positive but the neurologic examination was otherwise essentially negative.

On the day of admission the hemoglobin was 80 per cent, the red blood cells numbered 4,200,000, and the white blood cells 16,000 per cu. mm. of blood, with 47 per cent polymorphonuclears, 28 per cent band forms, 15 per cent lymphocytes, and 10 per cent monocytes. The blood Kahn was negative. The urine was negative except for a trace of albumin. The spinal fluid was under increased pressure but contained only 5 lymphocytes and was otherwise normal. A roentgenogram of the spine was negative. In view of the history of recurrent furuncles and the findings it was believed that an acute vertebral osteomyelitis probably secondary to staphylococcal septicopyemia was the most probable lesion, in spite of the negative X-ray film. Sulfapyridine therapy was immediately begun and preparation was made for repeated transfusions.

Neurosurgical consultants were of the opinion that expectant treatment with careful check of neurologic findings was indicated. During the next few days the course was progressively downhill, the patient being in almost constant delirium and the temperature remaining constantly about 103.5°F. On December 16 the spinal fluid showed 300 polymorphonuclear leukocytes, and it was the opinion of the neurosurgeons that there were signs of intracerebral involvement. On December 18 a blood culture was reported as showing *Staphylococcus aureus hemolyticus*. An attempt to obtain sulfamethylthiazol was unsuccessful. The blood picture at this time showed a marked degenerative shift, the white blood cells numbering 6,800, with 32 per cent polys, 42 per cent bands, 15 per cent lymphocytes, and 12 per cent monocytes. Further attempts to do a spinal tap were unsuccessful. X-ray films of the spine, skull and chest on December 18 were reported negative. A blood culture and stool examinations for *Bacillus typhosus* were negative. No new focal signs had appeared. The retinae continued to be negative for miliary tubercles. The clinical course continued downhill despite the maintenance of adequate blood sulfapyridine levels and transfusions. Catheterization of the urinary bladder had become necessary, but no other evidence of a cord lesion appeared.

On December 22 a course of Uleron therapy was begun and sulfapyridine was discontinued. After 36 hours of Uleron therapy the temperature became septic in type, ranging from 99.5° to 103°F., and there was some apparent clinical improvement. On December 24 a rough systolic pulmonic murmur appeared, and it was feared that this indicated the development of bacterial endocarditis. However, the murmur disappeared in a few days without a diastolic element having become audible. Blood cultures were reported positive for *Staphylococcus aureus* again on December 21 and December 26. A gram-positive diplococcus (not pneumococcus) was reported in the blood on December 28.

On December 27 sulfamethylthiazol therapy was begun, and after 24 hours the evening elevations reached only 101°F., gradually lessening in the following week. During this time the clinical picture continued to improve but a cough had developed and a roentgenogram of the chest showed an opacity in the region of the right upper lobe which was believed to represent either pneumonia or an early abscess. A roentgenogram of the spine continued to show no evidence of osseous pathology. The neurologic symptoms had now become far less marked, and the patient was able to move the legs without pain and was voiding without difficulty.

On December 31 the supply of sulfamethylthiazol was exhausted, and due to the marked clinical improvement no further chemotherapy was attempted. The temperature continued to drop, reaching normal on January 3. On January 5, however, the temperature again began to "spike" to 100°F.; and on January 8 a roentgenogram of the chest showed complete disappearance of the opacity previously described, but there were now well defined areas of increased density about the size of marbles in the first anterior interspace on the right and the third anterior interspace on the left. These areas were thought to represent areas of pneumonitis surrounding septic emboli. In addition to these findings there appeared in the muscles of the left abdominal wall what was apparently a slowly developing abscess. Sulfamethylthiazol therapy was resumed and the probable abscess regressed. The drug was continued until January 13, at which time the temperature was normal. During the course of sulfamethylthiazol there was marked improvement in the blood picture, the white blood cells numbering 6,200, with 50 per cent polys, 7 per cent bands, 40 per cent lymphocytes and 3 per cent monocytes. Following the discontinuance of sulfamethylthiazol the temperature again "spiked" irregularly to 99° or 100°F. Another course of the drug was begun on January 17, and there was rapid subsidence of the temperature to normal.

The clinical picture continued to improve, and on January 24 a roentgenogram of the chest was clear. All therapy other than supportive was discontinued on January 28, 11 transfusions having been given during the course of the illness. The patient has continued to gain weight and strength, has remained afebrile, is up and around and feels well.

During the entire course of therapy both with Uleron and sulfamethylthiazol there was no evidence of gastrointestinal irritation, bone marrow depression or other toxic manifestations.

Summary and Conclusions

A case of proved hemolytic staphylococcus aureus septicemia with fairly widespread metastatic abscess involvement was treated with sulfapyridine, Uleron and sulfamethylthiazol in addition to transfusions and general supportive measures, with clinical cure. Sulfamethylthiazol was apparently the most effective drug.

The case seems worthy of note, not so much in view of the fact that the patient survived but that metastatic abscesses which would ordinarily have gone on to extensive tissue destruction apparently resolved without demonstrable changes in the tissues involved. The actual presence of vertebral osteomyelitis on admission is problematical, since roentgenograms did not reveal any evidence of lesions. There is apparently no question that the central nervous system was involved, although the location and extent of the lesion or lesions is questionable.

Sulfamethylthiazol is apparently an effective drug in staphylococcal infections. A total of 86 grams was used in this case without observable toxic manifestations.

N. B. Dr. Haskell Rosenblum, Assistant Surgeon, Acting Chief Medical Officer, National Training School for Boys, sent the patient to the hospital and obtained the sulfamethylthiazol from the Winthrop Chemical Company used in this case.

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TREATMENT OF PNEUMOCOCCAL PERITONITIS WITH SULFAMIDO DRUGS AND SERUM

REPORT OF TWO CASES

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Raffel and I[1] reported in 1938 a case of pneumococcal peritonitis with recovery following operation and the use of Prontylin. In this case the peritoneal cavity was closed without drainage after sufficient pus had been removed for diagnostic purposes.

The following cases are reported for the purpose of again calling attention to the use of chemotherapy in the treatment of this disease.

Report of Cases

Case 1. A white female child aged 7 years was admitted to Children's Hospital June 16, 1938, complaining of severe generalized abdominal pain, nausea, vomiting, fever, chills, severe diarrhea, nasal bleeding and a severe toxemia of 48 hours' duration. A mild laxative had been given by the parents at the onset of the disease. The child was of average height and well nourished but appeared acutely ill. Examination revealed a red throat, injected tonsils, a soft systolic apical murmur and extreme rigidity of the anterior abdominal wall. There was marked pain on palpation of the abdomen and this was most marked in the right lower quadrant. Sudden release of pressure on the abdomen caused pain. The rectal temperature was 103.6°F., the pulse rate was 160 per minute, and the respiratory rate was 42 per minute. A white blood count revealed 18,600 cells per cu. mm. of blood, of which 2 per cent were myeloblasts, 9 per cent lobulated polymorphonuclear neutrophils and 27 per cent staff forms, the total polymorphonuclear count being 98 per cent. A urine examination showed the presence of a moderate amount of pus and a few granular and hyaline casts; the specific gravity was 1.020. The patient was irrational at the time of admission and remained so for several days thereafter, not completely recovering for a period of 7 days. A diagnosis of general peritonitis as a result of an appendiceal perforation was made and it was decided to wait for several days before operating in the hope of some localization of the infection. No fluid was given by mouth, the necessary amounts being given in the form of Hartmann's solution and 10 per cent glucose solution. The use of Prontosil was started on June 17 intramuscularly and was continued until the day of operation. During this period the temperature varied between 101° and 106°F., and the pulse rate between 120 and 160 per minute. The respiratory rate varied between 20 and 45 respirations per minute. Examination on June 19 revealed a sense of fullness in the right lower quadrant, although the abdomen was distended, rigid and tender. The diarrhea had continued.

Operation was performed on the 19th, gas anesthesia being used. A McBurney incision was made. On opening the peritoneal cavity a large amount of odorless pus escaped. The bowel was injected and covered with lymph plaques. A smear was made and material for typing collected. Two soft rubber tissue drains were inserted. The abdomen was closed. The organism proved to be a pneumococcus Group B, Type VI, and 60,000 units of antipneumococcal serum was given in the next few hours. Sulfanilamide was given in normal saline subcutaneously daily for 3 days and then intermittently as it seemed needed; the blood concentration on the fourth day after operation was 5 mg. per cent. The pneumococcus was recovered from the blood but not from the vagina. The convalescence of this patient was uneventful and she was discharged as recovered from the hospital in 47 days.

Case 2. A white female child 6 years of age was admitted to Children's Hospital, May 29, 1939, with a history of severe abdominal pain, nausea, vomiting, and diarrhea of 48 hours' duration. She was slightly irrational, extremely toxic, and dehydrated. The throat was injected, and the abdomen was tender and rigid over the entire surface. Her temperature was 103.8°F., the pulse rate was 130 per minute, and the respiratory rate was 30 per minute. A white blood count revealed 11,100 cells per cu. mm. of blood, of which 72 per cent were segmented leukocytes, 5 per cent were staff forms, and 2 per cent were metamyelocytes. A urine examination showed a large amount of albumen, a moderate amount of pus, some granular casts and acetone; the specific gravity was 1.020.

A diagnosis of general peritonitis was made, probably from a ruptured appendix, although the possibility of a pneumococcal peritonitis was considered. Glucose and Hartmann's solutions were given intravenously and the patient operated upon. A McBurney incision was made, and a large amount of odorless pus was found.

A smear revealed pneumococci. Sufficient pus was removed for typing, which was immediately done. Type I was found. A soft rubber drain was inserted and the abdomen closed.

A few hours after operation the temperature was 105°F., and the pulse rate was 140 per minute. The respiratory rate at this time was 40 per minute. Neither temperature, pulse nor respiration was ever as high as this again, although it was 34 days before they remained normal. Three hours after the patient had reacted the administration of sulfapyridine was begun and 40,000 units of Type I antipneumococcal serum was given. A blood transfusion was also given. Serum was not given again but the use of sulfapyridine was continued until the twenty-first day following operation. On the fourth day the blood concentration of sulfapyridine was 8.3 mg. per cent. At this time the patient's general condition seemed good, but she was still febrile, the temperature varying between 98.6° and 102°F. The pulse was of good quality and regular, but the rate remained above 100 per minute. A mass appeared in the lower left quadrant 2 weeks after the first operation, which had the characteristics of an abscess located in the peritoneal cavity. An exploratory operation was attempted. The bowel was found firmly adherent to the peritoneum, which on being separated revealed numerous loops of bowel adherent to each other. No further attempt was made to find the abscess.

The patient gradually improved and was discharged 41 days after the first operation. Eight weeks after the operation no evidence of an abdominal mass was found and the patient had completely recovered from the peritonitis.

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Blood serum has possibilities as a transfusion substitute. The possibilities of blood serum, the colorless liquid part of the blood in which the blood cells are suspended, proving to be an effective substitute for blood in transfusions, are indicated in investigations reported by Sidney O. Levinson, M.D., Frank Neuwelt, M.D., and Heinrich Necheles, M.D., Chicago, in *The Journal of the American Medical Association* for February 10, 1940.

The life saving benefits of such a substitute in combating the effects of hemorrhage are indicated by the fact that it can be given in massive amounts without delay or preliminary typing as is required for blood transfusions, the Chicagoans point out. It also can be stored in large amounts for long periods of time without deterioration.

Although most of their investigations of the value of blood serum were on dogs they report that they had the opportunity of employing serum in a limited number of human cases and found the effects paralleled the beneficial results observed in the animal cases.

"There is urgent need for an effective blood substitute," the three men state. "Even in large hospitals and in large cities where blood can be secured with relative promptness there are situations in which immediate availability and injection of a good blood substitute would improve treatment and enhance the outlook from massive hemorrhage. A greater need for a blood substitute exists in small institutions and small centers of population where there is greater delay and more difficulty in performing blood transfusions.

"Although whole blood is the best restorative fluid in massive hemorrhage, our investigations have demonstrated that serum overcomes all the effects of hemorrhage in dogs except the loss of red blood cells (this loss, as we have seen, may be quite extensive without serious effects). There are many practical advantages in the use of serum as a blood substitute. It may be prepared, tested and stored in large quantities for long periods of time without deterioration.

"Pooled serum (from a number of persons) may be given without any regard for blood groups and does not require preliminary typing and compatibility tests. This allows serum to be administered without delay.

"Serum after proper preparation requires no particular care (refrigeration temperatures are of no concern), may be transported easily and can be handled and injected as simply as saline (salt) solution. If serum transfusion should prove to be as effective in treating hemorrhage and subsequent shock in man as it appears to be in the dog, it would be a valuable and effective blood substitute.

"The use of serum, as an interval treatment, should prevent the development of shock. It should remove the need for 'emergency' transfusions and the necessity for hasty blood typing and compatibility tests. Serum transfusions as an immediate and interval treatment should prevent or combat oligemia (blood volume deficiency), shock, acidosis and the like, so that if blood is subsequently administered it will be given to overcome secondary anemia (brought about by the hemorrhage and consequent deficiency of red blood cells) rather than to treat the shock and collapse that is customarily encountered following massive hemorrhage (a condition requiring immediate treatment).

"Human serum, as a blood substitute, should find wide use not only in civil emergencies, but particularly in time of war at the battle front."

SULFAPYRIDINE—IS IT A SAFE DRUG?*

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It was only 18 months ago, yesterday to the very day, that Whitby's original article[1] on sulfapyridine appeared. In it he reported on the efficacy of this drug in the treatment of experimental infections in mice. Today there is hardly a physician alive who does not know something about the drug, and very few who have not tried it for one condition or another. Surely this is a remarkable example of the coördination and integration of modern medical science. Indeed, we are told that the drug has already been signed up by Hollywood and will appear in an important role in the forthcoming picture, "The Secret of Dr. Kildare."

This brings us to a consideration of what constitutes the safety of a drug. There is no absolute criterion of what constitutes a safe drug. Is arsphenamine, which each year takes its toll of lives and serious injuries, a safe drug? In the last analysis, safety is a function of therapeutic value and therapeutic indispensability. The Food and Drug Administration was faced with exactly this problem concerning sulfapyridine on October 7, 1938, when the first new drug application on sulfapyridine was received. Section 505 of the new Food, Drug and Cosmetic Act prohibits traffic in new drugs unless such drugs have been adequately tested to show that they are safe under the conditions of use prescribed in their labeling. Under this section of the law an application must be filed with the Secretary of Agriculture containing full reports of investigations concerning the safety of the drug and other information. The Secretary is required to satisfy himself that the drug is safe before permitting the application to become effective. Because it was extremely important that a correct answer be obtained before the drug could be permitted on the market, it may be of interest to review briefly the story of our search for an answer to this question.

In view of the early reports in the English literature concerning the therapeutic and possible toxic effects of this drug, it was deemed essential to make an extensive and comprehensive study of the available data relating to its safety. At this time there were no published reports available in the American literature concerning these. It was therefore deemed advisable to secure the necessary information by direct contact with physicians who had received this drug for experimental purposes. With this in view, the manufacturers who were making experimental shipments were visited and this data obtained from them. It was learned that until January 25, 1939, approximately 280 physicians or investigators had received consignments of the drug for experimental use. Of these, approximately 100 received enough to justify the expression of an opinion concerning its safety. Each one of these physicians was either interviewed or addressed by letter. It was felt that those who had actual experience were best qualified to speak authoritatively concerning the safety of the drug. In addition to these, a number of other physicians and investigators who were indirectly acquainted with the consequences of its use were interviewed. These were consulted because of special knowledge concerning some of the diseases treated with the drug or because they were recognized as outstanding physicians or critics.

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* Read before the Society, November 29, 1939.

The combined experiences of these physicians represent knowledge gained from more than 2,000 cases of pneumococcal pneumonia in human beings. These case reports which were assembled from all parts of the United States and included experiences obtained during the fall of 1938 and January and February 1939 occurred in all age groups, and all pneumococcal types were represented.

Toxic Manifestations

It was the consensus of opinion that the therapeutic use of the drug was accompanied by certain untoward effects. These were in their general nature similar to those encountered in the use of sulfanilamide. It is significant that there was no death directly attributable to the drug in the series of cases investigated. The toxic manifestations (table 1) were as follows:

TABLE 1

*Toxic Manifestations of Sulfapyridine**

CONDITION	NO. OF REPORTERS	NO. OF CASES	NO. OF PATIENTS	PER CENT
Nausea, vomiting	16	285	790	36
Nausea, vomiting, severe	3	33	250	12
Dizziness, restlessness	3	18	190	9
Cyanosis	4	15	187	8
Renal symptoms, etc	2	4	75	6
Fever	2	5	110	5
Anemia, mild	8	16	354	4
Drug rashes	4	9	259	3
Anemia, severe, hemolytic	7	5	463	1
Neutropenia	10	5	680	1
Toxic hepatitis	3	3		
Deafness	1	1		

* These figures do not include the observations of many clinicians who did not make available quantitative data.

Nausea and Vomiting.—These symptoms were those most frequently encountered. In 790 cases reported by 16 investigators 285 instances of nausea and vomiting of varying severity were encountered. Of these, 3 investigators out of 33 who had treated a total of 250 cases of pneumonia reported these symptoms severe enough to be troublesome. Among those physicians who submitted incomplete data relative to either the number of cases treated or the number suffering from these complications the figure of 50 per cent incidence of nausea and vomiting was frequently quoted, which is slightly higher than the 36 per cent incidence in the series for which complete data are available. Other investigators stated that practically all their patients had some degree of nausea and vomiting. It is significant, however, that almost as many investigators failed to report these as prominent untoward symptoms. The data submitted for infants and children indicated a lower incidence of nausea and vomiting amounting to a frequency of less than 10 per cent.

Cyanosis.—This manifestation was specifically reported by 4 investigators in 15 out of 187 cases (8 per cent), and by a number of other physicians who did not state the exact number of cases seen. The general impression is that sulfapyridine causes cyanosis less commonly than sulfanilamide. The manner in which sulfapyridine causes cyanosis, whether by the formation of methemoglobin or sulfhemoglobin or by some other mechanism, is not clear from available data. It is well known, of course, that pneumonia itself may cause cyanosis.

Leukopenia and Leukocytosis.—A mild leukopenia has been noted by many investigators. It was noted as specifically present in 5 cases by 4 investigators with a total of 280 patients. Six other investigators with a total of 400 patients reported that careful study had failed to reveal a single instance of leukopenia. In no instance has the leukopenia been severe enough to result in death, and invariably the cessation of the use of the drug resulted in a return of the neutrophils to normal levels. In 3 instances the neutropenia was severe but disappeared when the drug was discontinued.

At least 9 cases of true agranulocytosis from sulfapyridine have been reported in the medical literature. Johnston[2] in the November 18, 1938 *Lancet* described a primiparous patient aged 36 who suffered extensive lacerations in instrumental delivery of a fetus and had manual removal of the placenta. Sulfapyridine was given when she developed signs of peritonitis and *Streptococcus viridans* septicemia. Leukopenia was detected on the eighteenth day, a systolic murmur became audible over the precordium, and death occurred on the twenty-sixth day. The lowest total white cell count in this case was 1,200 with 8 per cent polymorphonuclears. The patient received 54 grams of sulfapyridine in 11 days.

Less than a month later, Coxon and Forbes[3] described a woman, aged 42, whose primary illness was typhoid fever. Thrombosis of the femoral and popliteal veins appeared several weeks after the onset of the illness and M. and B. 693 (sulfapyridine) was administered. After 54 grams had been given during 18 days, she complained of sore throat and had a chill with a rise of temperature. On the fifth day following discontinuance of sulfapyridine the white cell count was 100 with complete agranulocytosis. This patient recovered despite thrombosis of the right femoral vein. The original illness may have been a contributory factor in this case, although the agranulocytosis appeared a considerable time (6 weeks) after the onset of symptoms of typhoid fever.

Barnett, Hartman, Perley and Ruhoff,[4] in their series of children treated with sulfapyridine for pneumococcal infections, described a child in whom agranulocytic angina developed. This was a girl, aged 10 years, suffering from pneumococcal peritonitis and pelvic abscess. Her white cell count fell to 75 per cubic millimeter with complete agranulocytosis, then returned to 2,200 over a period of several days, during which abscesses formed in the neck. The patient died following a hemorrhage from an incision in the pharynx where drainage had been instituted. She received 80.9 grams of sulfapyridine during 17 days over a period of 26 days.

About this time Long,[5] in his article on sulfapyridine toxicity, discussed 1 case of agranulocytosis due to this drug.

Shullenberger[6] described another case. The patient, a white man 44 years old, was first seen in his home, January 30, 1939. He had a nonpneumococcal pneumonia, developed agranulocytosis, and later recovered. Three other reported cases of agranulocytosis due to sulfapyridine (Johnston, Coxon and Forbes, and Barnett, Hartman, et al.) are discussed in this review.

Rosenthal and Vogel[7] noted granulocytopenia in children caused by sulfapyridine. These authors state: "There is reason to believe that sulfapyridine is as toxic as sulfanilamide for the bone marrow, or more toxic, since we have observed 10 cases of granulocytopenia (including 1 in a child) in the past 2 years. However, we have in the past few months observed 3 cases of granulocytopenia in children following the administration of sulfapyridine. This, in fact, is the purpose of the present communication—to call attention to the danger of employing sulfapyridine over prolonged or intermittent periods unless careful and frequent study is made of the blood picture." They cite further cases.

Anemia.—Hemolytic anemia was encountered by 4 investigators in 5 cases among 243 patients and was absent in 220 cases reported by 3 investigators. In two instances severe hemolytic anemia appeared after 50 grams of the drug had been administered. In addition to these experiences a drop of 20 to 30 per cent in hemoglobin was noted by 5 investigators in 16 out of 134 cases, but absence of such a decrease was noted by 3 investigators among 220 cases.

Drug Rashes.—Data with respect to skin rashes are available in 259 cases. In 9 of the 259 cases seen by 4 physicians who reported concerning skin manifestations, eruptions of morbilliform, urticarial and erythematous character were noted.

Fever.—Several clinicians noted the appearance of pyrexia after the drug had been administered for several days. Two investigators who reported quantitative results stated an incidence of 5 such cases among 110 patients. Many observers made no mention of fever as a toxic symptom. When the fever was not accompanied by specific signs of a recrudescence of the infection it was attributed to the drug. This manifestation was apparently seen less commonly with sulfapyridine than with sulfanilamide.

Renal Symptoms: Hematuria, Oliguria.—Two investigators reported 4 cases of hematuria among 75 patients. These symptoms were noted in a few additional instances in which the patients were either severely ill or in whom dehydration had been permitted to occur; but in these cases more informative data were not made available.

Toxic Hepatitis.—This was specifically reported in 3 cases, in all of which recovery apparently occurred. One case of acute yellow atrophy was reported to us prior to the beginning of this study; subsequently, autopsy left a question as to whether this was caused by the drug.

Jaundice.—Jaundice following administration of the drug was referred to by several. The ultimate significance of this is not at this time definitely known, but it was not regarded at the time as a serious untoward effect by those experts who were giving consideration to it.

Nervous Symptoms: Dizziness, Restlessness, Paresthesia.—Dizziness was reported by 2 investigators in 5 of 90 cases and cerebral symptoms in 13 of 100 cases by another investigator. Apparently these symptoms have not been as prominent as those that infrequently appear following sulfanilamide ingestion. Only 2 investigators with small series of cases reported them. One physician reported an instance of deafness.

Any evaluation of sulfapyridine must take into consideration the findings of Marshall, Bratton and Litchfield,[8] who pointed out that because of its difficult solubility sulfapyridine is not uniformly absorbed.

DEVELOPMENTS SINCE GENERAL AVAILABILITY OF SULFAPYRIDINE TO THE MEDICAL PROFESSION

In so far as toxicity is concerned, we know of no developments new in character or different in kind from those observed before the drug was released for general use by physicians. This is confirmed by the papers of J. Goudsmit[9] and Plummer and Ensworth.[10]

No further cases of acute yellow atrophy have been discovered, and it might be that the original case so reported was not a result of this drug.

The development of calculi in the urinary tract has, however, received increasing emphasis and is a more disturbing complication than was at first suspected. Animal experimental work on this has been reported by Hans Molitor,[11] Gross, Cooper and Lewis,[12, 13] and Antopol and Robinson.[14]

Antopol and Robinson found that the concretions consisted of acetylsulfapyridine and the tendency to their formation varied with the species. Mice and dogs could tolerate large doses of sulfapyridine without stone formation. On the other hand, rats were quite susceptible to this complication, and monkeys were liable to it. In some instances they observed the deposition of calcium about the concretions.

Gross, Cooper and Lewis[12, 13] found on chemical analysis that the stones were composed of 64.1 per cent acetylsulfapyridine and 6.4 per cent sulfapyridine.

Ratish, Bullowa, Ames and Scudi[15] isolated and described monoacetylsulfanilyl-2-aminopyridine in the urine after the oral administration of sulfapyridine to humans.

Tsao and McCracken[16] reported 5 cases of hematuria presumably caused by stone formation in children and suggested that children are probably more susceptible than adults.

Four cases of hematuria were seen by Snapper, Liu and Ching.[17, 18] Autopsy in 1 of these showed the presence of crystals of acetylsulfapyridine.

Southworth and Cooke[19] encountered 3 cases of hematuria with nitrogen retention. The condition cleared up promptly with the discontinuation of the therapy and forced fluids.

Ravel and Curtis[20] described a case in which hematuria and abdominal pain were present.

Duncan Graham[21] and associates in Canada reported 4 cases of gross hematuria with ureteral pain which developed in a series of 50 cases. In so far as uroliths are concerned, it is evident, however, that there are measures available, such as forcing fluids, whereby this complication can be generally avoided.

And now to answer the question, "Is sulfapyridine a safe drug?" At the present time it seems to be, and as an expression of this point of view the new drug applications for sulfapyridine were permitted to become effective by the Secretary of Agriculture. However, if new evidence changes this point of view, or if serious toxic manifestations appear in the future that have not been evident in the past, the Secretary has authority under the law to suspend the effectiveness of the application. If you will invite us to return and discuss this question ten years from now, we will be perhaps in a better position to answer it with a greater degree of finality.

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Cites factors which assure recovery from hernia of thigh. Early diagnosis and proper surgical management assure a favorable outcome of constrictive hernia of the thigh just below the groin, even for the aged, J. E. Dunphy, M.D., Boston, declares in *The Journal of the American Medical Association* for February 3, 1940, in discussing the cause of high mortality from this condition.

He points out that whereas in 1900 its mortality was reported to be 47 per cent, in 1930 the percentage was only slightly less, a fact which indicates the necessity for a careful consideration of the causes of death from this condition. A recent study revealed a mortality of 18 per cent when operation was performed early and 50 per cent when surgery was delayed.

The three principal factors contributing to the high mortality of this type of hernia, Dr. Dunphy says, are delayed treatment, the old age of many patients and the need of proper surgical management.

The vague character of the abdominal pain or the absence of local pain or tenderness in the groin often makes diagnosis difficult, he observes, recommending that "whenever a patient complains of vague digestive symptoms, particularly abdominal pain and vomiting, the possibility of a constricted thigh hernia must be considered. Often a physical examination in experienced hands is sufficient to establish the diagnosis, but if doubt exists an X-ray of the abdomen may reveal evidence of obstruction of the small intestine.

"The present study indicates that age assumes its chief importance when treatment has been delayed and gangrene of the bowel has developed," Dr. Dunphy maintains. "But early diagnosis and proper surgical management can do much to offset the influence of age. There were no deaths among ten patients, five of whom were more than 80 years of age, when operation was performed before changes of the blood vessels sufficient to necessitate removal of part of the bowel developed. In other words, if the diagnosis is established early operation can be performed with a remarkably low mortality even in the aged.

"The postoperative care of these patients should follow the established lines for patients with intestinal obstruction. However, the aged or feeble patient should be up and about in a wheelchair as early as the first postoperative day."

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THE PRESIDENT'S HOSPITAL PLAN

In a message to Congress on January 30, 1940, President Roosevelt said:

> "In order that at least a beginning may be made, I now propose for the consideration of the Congress a program for the construction of small hospitals in needy areas of the country, especially in rural areas, not now provided with them. Hospitals are essential to physicians in giving modern medical service to the people. In many areas present hospital facilities are almost nonexistent. The most elementary health needs are not being met."

The President then outlined the proposed hospital plan which he stated would require an expenditure of from seven and a half to ten million dollars. He recommended that this amount "be appropriated to the United States Public Health Service to inaugurate a program during the next fiscal year."

Ten days prior to the President's message, a committee appointed by the House of Delegates of the American Medical Association had visited the White House to discuss plans for the construction of hospitals with federal funds. According to reports, this conference was most satisfactory.

In the February 10, 1940 issue of the *Journal of the American Medical Association*, general satisfaction with the bill (S. 3230) introduced by Senator Wagner of New York, which would translate the President's recommendations into reality, was expressed. The *Journal* commented:

> "Here is a new pattern not observable in other medical or hospital legislation introduced in recent years. This measure provides for assisting state, county, health and hospital districts or other political subdivisions; thus it recognizes the local character of most problems in medical service. The total sum involved is relatively small, indicating the experimental nature of the proposal."

About the same time that Senator Wagner's Hospital Bill was introduced, Senator Mead of New York came forward with a bill, S. 3246, to authorize loans for hospitals, water, sewers, stream pollution control, and related projects and facilities. This bill proposes to authorize a federal appropriation of $300,000,000 for the projects mentioned. A hospital is defined as "any institution or facilities for treating illness or disease, including any health, diagnostic, or treatment center, station, institution, or clinic." It is proposed that not more than $100,000,000 shall be devoted to hospital projects. Informed observers do not believe that the Mead Bill will get far.

In general, comments of professional and lay groups on the President's hospital plan have been favorable. However, here and there a voice has been raised in protest. General Hugh S. Johnson is highly displeased. Under date of February 4, 1940, he wrote:

> "It is hard to write a word favorable to the President's plan to have the Federal Government begin building small 'experimental' hospitals in towns that do not have such service. I have lived in such towns myself. Even in larger towns which have had such hospitals, I have been made personally and painfully aware of the backwardness of some doctors who do not or cannot keep in touch with the rapidly improving and developing medical profession.
>
> "It is desirable to have hospitals in places where they are not. So are many other things desirable. It would be swell for every family to have an income of $2,400 a year, for every boy and girl to go to college, and for all ill or undernourished people to be taken care of and restored to robust health. But there are limits to what the Federal Government—or any state or city government—can undertake or do.
>
> "This is a request for a maximum of only $10,000,000

to build experimental hospitals. But what is there 'experimental' about small hospitals? The government has hundreds of them at army posts or on naval vessels. And if it is just and proper for the government to favor one small community by building a hospital for it, how can it refuse to build one in every town in similar circumstances? That wouldn't be a matter of $10,000,000. It would be undertaking by the government of a complete new field of spending that might run into billions of dollars and be added to many other new and somewhat questionable vistas of public spending that we have recently opened up.

"Furthermore, the mere building of a hospital is only a beginning. The cost of maintaining it is continuous and very high. News reports of the President's proposal say nothing about provision for that, except that they do say that the government will own the hospitals. If it owns them it will be responsible for them. The expense of running them plus their original cost would run into staggering figures.

"If it had been only a matter of providing buildings, the billions that have gone through WPA into some far less worthy projects could probably have built all the hospitals that are needed—especially in the old federal and civil works administrations, where billions appropriated in part for national defense went for raking leaves.

"Hard-boiled as any criticism of this project must seem, Congress owes a positive and pressing duty to examine in all its implications before it opens any more expanding spigots into the federal treasury. It has all the earmarks of the Arab's camel which began by persuading its master to let it stick just the tip of its nose under the tent to get it out of the cold, and wound up by wearing the tent as a horse-blanket, leaving the Arab—nose and all—in the chill of the outer darkness.

"It is true that this proposal doesn't go as far as Senator Wagner's great liberal generosity with tax-payers' money and propose universally socialized medicine at whatever the cost. It doesn't go as far as Dr. Townsend would like to go to maintain the third of us past middle age at the expense of the third of us who are working and producing to support and prepare the third of us who haven't started. But it goes in the same direction as both of these suggested kindly benefits.

"There are plenty of people who are devoting their great hearts and talents to devising ways and means to spend the public and private treasure of others. It is a pity that there is not just as great an effort and imagination to think up schemes to get the money in any way other than borrowing it to increase the already staggering public debt."

There are great numbers of physicians as well as laymen to whom the sentiments expressed by General Johnson will appeal as sound common sense. Many physicians, however, are in accord with the President, that needs for hospital facilities should be met, although they have taken note of his statement that:

> "Conditions described a year ago are substantially unchanged today. There is still need for the Federal Government to participate in strengthening and increasing the health security of the nation. Therefore, I am glad to know that a committee of the Congress has already begun a careful study of health legislation. It is my hope that such study will be continued actively during the present session, looking toward constructive action at the next."

It is clear that the President still hopes to see the National Health Bill enacted.

AVIATION MEDICINE AND OPHTHALMOLOGY

The latest development of a specialty in the profession of medicine is Aviation Medicine. Its outstanding subjects are ophthalmology, otolaryngology, psychology and internal medicine. It embraces particular phases of these divisions of the art.

Recent wars have clearly demonstrated that the nation having supremacy in the air will have its adversary at its mercy and may be enabled to destroy him. To achieve such supremacy mechanical equipment is of great importance and requires the greatest effort and the longest time. The selection of young men for this highly technical work can be done only by physicians well trained in the particular methods of examination. Our country has only too few doctors so trained. The experts in this field are largely in the Medical Corps of the Army and the Navy and the Civil Aeronautics Authority. Since they have had the widest and largest experience in the field of aviation medicine, they are obviously highly qualified to instruct the civilian personnel where but few have had such opportunities. There are many thousand pilots to be trained for the increasing demands in civil and civil-military aviation, and the Air Corps of our Armed Services are undergoing great expansion.

Having in mind the necessity of making available to the medical profession of the Western Hemisphere a short intensive course in Aviation Medicine and Ophthalmology, the Department of Ophthalmology of the George Washington University School of Medicine has organized such a course, which will be given from April 1 to 6, 1940, inclusive.

The guest lecturers are flight surgeons from the Medical Corps of the Army, the Navy and the Civil Aeronautics Authority, who have generously accepted the invitation to give the lectures and demonstrations throughout the week of April 1 to 6. The coöperation of the War and Navy Departments and Civil Aeronautics Authority in making available these officers has been active and interested. Major General James C. Magee, Surgeon General of the Army, and Rear Admiral Ross T. McIntire, Surgeon General of the Navy, have given the officers of their Corps every opportunity, compatible with the requirements of the service, to be in Washington for the purpose of giving these lectures.

So far as we are aware there is no short intensive course offered to the medical profession in this most important subject. It should fulfill a much required need. The lectures will be stenotyped and bound in a volume and should be valuable as a textbook.

The course is not confined to the ophthalmologic aspects of aviation but embraces all these particular problems in internal medicine. The Chief of the Medical Section of the Civil Aeronautics Authority, Dr. Eldridge Adams, and his assistants, Dr. Walter A. Ostendorf and Dr. William R. Stoval, Senior Medical Officers, will contribute valuable data to the course, with particular reference to administration and the necessities of commercial aviation which differs in some very important details from military aviation.

It is doubtful if such a comprehensive course so completely covering the subject could be organized in any city except the National Capital where the coöperation of the Army and Navy and Civil Aeronautics Authority is available. This specialty is advancing so rapidly that only a course of lectures by those actively engaged in this work can bring it up to date.

With the world aflame with war and all the hatred and insane murderous rage it engenders, it behooves our country to prepare for any emergency. It is not impossible that we too may have to fight for our very existence and the lives of those dearer than life to us. Preparation for warfare in the air and particularly the training of pilots requires much time. The selection of those qualified to take such training requires particularly endowed physicians who must themselves be trained in this new art. To this end this course is shaped with the hope that the University may contribute its small part in building up the defences of this our native land.

W. T. D.

CHANGE COMES TO STATE MEDICAL JOURNALS

The views expressed by Sir Robert Hutchinson in regard to medical literature, which appeared in the Medical Annals for January 1940, have been widely quoted.

For the benefit of those who may not have seen Sir Robert's comments, the following excerpt is quoted:

> " . . . medical writers are not only afraid of romance, they even fight shy of humour. They seem to think that dullness is expected of them and do not agree with the virgilian tag that 'in order to speak truth it is not necessary to pull a long face' and still less with the character of Stevenson's who thought that there was 'nothing like a little judicious levity.' And yet, it is probably true that a writer has never really mastered his material until he can jest about it; until then it has mastered him. Whilst therefore the volume of medical literature betokens an intense activity of observation and research, its contents on the whole are dull and pedestrian."

If there is justification for Sir Robert's complaint about medical writing, there would seem to be an equally sound basis for criticism of medical editors who ignore the appearance of their journals. For there are still those who belittle the importance of the "dress" of a medical journal, and who are content so long as the print is readable.

In this day of innumerable publications, many of them of a very high order, one cannot dismiss this matter lightly. For the physician, like other persons, is attracted by the appearance of a book or a publication, even to the extent that he will read a medical journal which has readable type, is amply illustrated and has an attractive format, in preference to one which is unattractive.

There is ample evidence that most editors of state medical journals recognize this fact. An examination of these journals reveals that many of them have, in recent years, had a general overhauling. One sees the unbroken page of solid type much less frequently. Publications with no pretense of style or color are not so numerous. On the other hand, it is observed that most journals show that their editors have given thought to the lay-out of the pages so as to attract readers. Colors are used on the cover, and in general there has been an attempt to attract the eye. And most important, the resulting financial success has made possible all-around better publications.

Obviously, medical journal "dressing" is no substitute for first class editorial matter. However, we have Dr. Morris Fishbein's word for the fact that state medical journals have improved vastly in this regard in the past ten years. It would therefore seem that we can confidently look forward to the publication of constantly improving journals of much greater interest and value to the membership of their respective medical organizations.

STEADY GROWTH

It is significant that the membership of The Medical Society of the District of Columbia has, in recent years, shown a steady growth. Apparently the controversy in which the Society has been involved has cemented the membership and brought into its ranks physicians who might not otherwise have been inclined to affiliate themselves. Whatever the reason, the fact remains that the Society is a stronger unit today than it has ever been.

The following figures show an increase in all classes of membership except Honorary in the past four years:

	ACTIVE AND LIFE MEMBERS	ASSOCIATE MEMBERS	HONORARY MEMBERS	TOTAL
January 1, 1937	750	119	7	876
January 1, 1938	789	134	7	930
January 1, 1939	842	153	7	1,002
January 1, 1940	885	178	7	1,070

It is to be hoped that this healthy growth will continue to a point where all eligible physicians will be members of the Society. There is every reason to believe that this will happen.

PERTINENT PARAGRAPHS

February Meetings Meetings during February were nearly as numerous as last month. Below is a list of meetings held by the Society and its Boards, Committees and Sections:

February 1	Section on Neurology and Psychiatry
February 7	Business Meeting of the Society
February 8	Committee on Public Relations
February 9	Committee on Radio Education
February 13	Subcommittee on Finance for the Annual Scientific Assembly
February 14	Scientific Meeting of Society
February 16	Section on Ophthalmology and Otolaryngology
February 20	Obstetrical Board
February 26	Committee on Medical Economics Executive Board
February 27	Committee on Radio Education
February 28	Scientific Meeting of Society
February 29	Section on Pediatrics Board of Censors

Recommendations Governing Publicity

The Committee on Public Relations submitted the following recommendations in regard to publicity to the Executive Board at its meeting on February 26:

"The Medical Society of the District of Columbia recognizes its obligation to provide the public with authentic health and medical information. It has, therefore, assigned to its Committee on Public Relations the task of furthering its health educational program. An important part of the Committee's duties relates to the preparation and release of newspaper articles. It is essential in this connection that the Committee have the coöperation of the Society membership.

"For the guidance of Society members, the following recommendations governing publicity have been adopted:

1. The Committee on Public Relations is the agency through which the Society and its members should approach the public on all matters relating to medicine.

2. Members desirous of giving information to the press on a health or medical subject should notify the Secretary in order that the Committee on Public Relations may arrange and supervise its proper release.

3. Members invited by individuals or organizations to make a public address, a radio appearance or to write articles on a health or medical subject for lay consumption, should also notify the Secretary so that they may have the benefit of the Committee's suggestions. Society members are advised against broadcasting articles over the radio, or releasing them to lay publications, without the approval of the Committee. Adherence to this procedure will afford protection to both the public and the medical profession.

4. Any officer or chairman or member of a committee of the Medical Society of the District of Columbia who writes an article for the lay press, or delivers a speech over the radio or in public, on a health or medical subject, should use only the title of his office in the Society and none of his personal titles. No member is authorized to publicly commit the Society to a policy unless specifically instructed to do so.

5. To guide physicians who desire to write articles for lay consumption or to speak in public, the following suggestions are offered:

(a) Proper medical publicity is the issuance of a public statement concerning an event of general interest and importance. It stresses the happening rather than the individual.

(b) Undesirable medical publicity is the publication of material relating to individual activities designed to magnify the importance of that individual in the eyes of the public.

(c) Public health education is the impartial instruction of the public in facts relating to the nature, prevention and treatment of disease. It stresses the facts rather than the individual presenting them."

The Board gave its approval to the above recommendations, which were a revision of those adopted on August 3, 1938.

Health Department Situation

Further consideration was given to the proposed reorganization of the District Health Department at a meeting of the Society on February 7, 1940. In its report, the Board stated:

"On the day following the Society's meeting on January 24, 1940, when the Society voted its unanimous opposition to the proposed changes in the District Health Department, the District Commissioners decided to offer a substitute for Section 209 of the Reorganization Bill relating to the Department. The new section reads as follows:

'The functions of the Health Department shall be continued in accordance with existing law and such Commissioners' regulations not inconsistent with law. In selecting a Health Officer, the Commissioners may request the President of the United States to designate an officer from among the medical officers of the United States Army Medical Corps, the United

States Naval Medical Corps, or the United States Public Health Service Corps, and the President at his discretion, may designate such an officer who shall, during the time specified by the President, be health officer of the District. The officer, if so designated, shall be under the general supervision and control of the Commissioners of the District and shall exercise all powers and authority vested in the health officer of the District.

'If the pay and all wages of the officer so designated be less than the compensation of the health officer of the District, said officer shall be entitled to receive such compensation in addition to his pay and allowances received from the United States as will make his compensation equal to that paid the health officer of the District.'

"As soon as the text of the above section had been verified, copies of it were forwarded to the Society's Committee on Public Policy, which by unanimous vote expressed its opposition. In the Committee's opinion, the only difference between the substitute section and the original is that one is mandatory and the other is not. Both permit the President of the United States to designate an officer of the U. S. Public Health Service Corps as Health Officer for the District. Appointments may also be made from the Army and the Navy Medical Corps under the provisions of the new section.

"It is significant that the bill states that 'The President, in his discretion, may designate such an officer who shall, during the time specified by the President, be health officer of the District.' The Committee feels there is no need for such a provision in the law unless it is contemplated to federalize the Department.

"Your Board agrees wholeheartedly with the Committee on Public Policy, and supports the position which it has taken."

The Society unanimously approved the Board's action.

Tasks Well Done

There are two committees of the Society about which the membership hears little, yet they have been very active. These committees are the Grievance Committee and the Committee on Industrial Medicine. The duty of the first Committee is to receive and, where possible, settle disputes arising between physicians or patients and physicians. The latter Committee deals only with complaints involving compensation cases.

The Grievance Committee has had several matters to adjust since it was established a little over a year ago. Its success is evidence that good judgment and tact have been shown. Many of the complaints which have come before this Committee have been of a very delicate nature, and too much praise cannot be given the Committee for the way in which they have been handled.

The Committee on Industrial Medicine has an equally difficult task and has discharged its responsibilities exceedingly well. Letters which have been received from physicians who for one reason or another have been required to appear before the Committee indicate their satisfaction with the manner in which the Committee functions.

Appointees to Health Security Administration

At the business meeting of the Society held on February 7, 1940, the Executive Board informed the Society that terms of the following appointees of the Society to the membership of the Health Security Administration had expired, and that they had been renominated for another year: Drs. A. B. Bennett, Charles B. Campbell, A. C. Christie, Raymond T. Holden, Oscar B. Hunter, J. Bay Jacobs, Loren B. T. Johnson, James Alexander Lyon, Henry C. Macatee, William B. Marbury, P. A. McLendon, Margaret Nicholson, Howard P. Parker, Herbert P. Ramsey, Sterling Ruffin and Joseph S. Wall.

REPUBLICAN COMMITTEE PROPOSES HEALTH PROGRAM

The report of the Republican Program Committee which was made public on February 19, 1940 is of especial interest to the medical profession. Several pages in the report are devoted to the health needs of the nation and how they should be met. Whether or not the Committee's recommendations will be incorporated in the Republican platform is, of course, uncertain. It would seem probable, however, that their adoption will receive serious consideration.

The following extract from the report has significance for every physician, and, it is hoped, will be widely read by the profession:

Amazing advances have been made in the fight against disease and death in the United States by the coöperating forces of laboratory science, medical practice, voluntary lay social groups, and the preventive measures of government. But there still goes on a "widespread erosion" of the lives and productive energies of millions of Americans from causes which a more intensive, adequately equipped, and better coördinated drive for the conservation and care of the nation's health could materially cut down or fully eliminate.

Historically and on the basis of current national interest, this is rightly a concern of government as well as a concern of the medical profession and of voluntary social groups. It is rightly a concern of government not only because basic human values, which must be a concern of enlightened government, are involved, but because preventable disease and the temporary withdrawal or permanent slowing down of the productive energies of its sick or unsoundly nourished citizens are a serious drain on the creative power of the nation.

The People's Government and the People's Health

Preventive medicine has been a definitely acknowledged public function at least since the fourteenth century, when the Great Plague led to the practice of quarantine. Since then there has been a cumulative evolution of public responsibility for public health. This evolution has gone through three broad states: (1) the stage in which there was little, if any, government concern with the health of the people, (2) a stage in which the government concerned itself almost exclusively with mass measures for public sanitation, community hygiene, and the control of communicable diseases, and (3) the present stage in which, in addition to the already widely extended scope of the government's health activities, it is contended by many that the government should actively enter the field of medical care, remedial as well as preventive, even providing complete medical care for the whole people, individually and in organized groups.

The relation of government to the enterprise of medical care raises the same fundamental question of national policy that is involved in the relation of government to business or to labor. In the field of medical care, as in the field of business, the issue is being over-simplified by the extremists. Between them, the two camps of extremists state the problem as involving a flat choice between public medicine and private medicine. These are not the alternatives between which we must choose. Earlier in this report, it was stated that we have had government intervention in business from the beginning of our government, that it will continue, that it is not a question of intervention or no intervention, but a question of nature, extent, and purpose of the intervention. So, in the field of health conservation and medical care, it is not a question of being forced to choose between a politically exploited state medicine, on the one hand, and a *laissez faire* individualism of private practice unrelated in any organized way to a statesmanlike drive for the conservation of the vital energies of the nation. It is a question of sound judgment as to the direction and degree of state action in the health field.

In the medical field, as in business and industry, with universal suffrage, the ultimate degree of state action will depend, in no small measure, on the long range vision of the medical profession. The people do not press the state to take in hand problems that are already solved or visibly on their way to solution. Here, as elsewhere, insensitive reaction in private leadership can breed irresponsible radicalism in public policy. The doctors cannot and should not be expected to meet single-handed all the problems involved in the conservation of the nation's health. But the medical profession can be expected to provide a willing, informed, and effective leadership in a broadly conceived effort to raise the health level of the nation.

The Fact of Need

Judgment will differ as to details. Where precise and comprehensive statistics are lacking, political estimates of social needs may be skeptically scrutinized, for they easily become part of the propaganda for proposed programs. Detailed estimates of remedial and preventive medical shortcomings, of existing needs in the field of hospital facilities, service, and financial support, and of gaps in the health education of the people are submitted separately in the detailed materials accompanying this report. It is enough here to say that there is general agreement that the as yet unmet health needs of the nation are great. Our social action lags behind our scientific knowledge. We know more than we do.

Vast numbers of Americans in the low and medium income groups, scattered through all our communities, are not receiving as good medical service as physicians, dentists, nurses, and hospitals are equipped to provide. Above the indigent level, they are reluctant to resort either to charity or to the free or near-free services of the public institutions of local and state government, and so, in whole or in part, go without needed medical attention. And even the indigent resort to free facilities more for cure than for prevention.

For those above the indigent level, the problem is one of the cost and distribution of medical care. The cost of thoroughly adequate medical care is plainly beyond the pocketbooks of, perhaps, a majority of the people. In justice to the doctors of the nation, it should be said that the high cost of medical care is not due to the average doctor's fees. It is due to the complicated and varied laboratory tests and treatment techniques involved in modern diagnosis and treatment. When the costs of these varied tests and treatments, the fee of the family physician or surgeon, the fees of the several specialists, the salary of the nurse, and hospital expenses are added together, the total strains the budget of a majority of American families. This is true even with the fees and charges all along the line put at a moderate level. This is a key point in the health problem—how to make the unavoidably costly service of modern scientific medicine attainable by the rank and file of Americans.

Health needs are most glaringly evident in certain rural regions and low income areas. This is due to more causes than the single fact of inadequate income—to an insufficient understanding of the medical service that is possible, to an insufficient number of qualified practitioners or of hospital beds in various areas, and, even more important, to a lack of sufficient funds to make possible a maximum effective use of hospital facilities that are available.

How Shall These Needs Be Met?

If we are not to destroy important values already developed and impose upon the already overburdened taxpayers an intolerable new burden, we must be realistic in our analysis of what can be done through existing machinery and be responsible in our estimate of necessary expenditures on an effective national health program. These qualities of realism and responsibility are not evident in the national health legislation suggested by the present administration.

The health legislation proposed by the New Deal leadership, like so many New Deal measures, sets as its objective certain broad results of general welfare about the desirability of which there is no dispute. The proposed legislation is not designed to proceed on an experimental basis with full opportunity to integrate it carefully with existing facilities and procedures. The whole tenor of the bill expressing this proposed program betrays an impatience with the painstaking and democratic methods of improvement by which alone the progress in health conservation to date has been achieved. And this progress, despite the still existing need, has been great. The appropriation suggestions seem largely the product of guess-work estimate, estimates based alike on exaggerated statements regarding needs and extravagant claims of the speed and scope of improvement possible with existing medical knowledge. The bill is so vague at points as to defy clear analysis, but it appears to imply the launching in all states of elaborate programs of medical service, under political sponsorship and control, to be financed either by deductions from wages or from general tax funds. And again, as in so many New Deal measures, the safeguarding of professional standards is not provided in the bill, but is left entirely to the discretion of politically appointed administrators.

The lack of realistic analysis and responsible estimate, in the administration's approach to the health problem, has been more recently illustrated by its proposal to build 50 or more 100-bed hospitals in rural areas, each hospital to cost in the neighborhood of $150,000, to be administered by local forces, but the title to the property to remain with the Federal Government. The lack of realistic analysis back of this proposal is evident in the three facts: (1) that a 100-bed hospital is larger than 60 per cent of the hospitals in the whole United States, (2) that it is doubtful that satisfactory hospitals can be built for $1,500 per bed, and (3) that there are few, if any, areas that can support a hospital of 100 beds which are not already supplied with hospitals and in need of adequate financing of their existing facilities rather than the erection of new hospitals. The first suggestion, quickly withdrawn, that these hospitals be wooden structures, illustrates the lack of responsible analysis back of much of the administration's planning in the health field. It would seem to be elementary that hospitals should be fireproof structures.

If the health needs of the nation are really to be met, they must be met by more realistic and more responsible thinking than the present administration has brought to the problem.

Lines of Positive Action

The broad lines of positive action in the health field by the Federal Government seem clear to this Committee.

The federal health service should be coördinated and concentrated within one department of government.

The federal health program should not weaken by competition or directly supplant worthy existing health agencies, but should work towards implementing and developing the agencies already in existence.

Such federal grants-in-aid as are made should go to the states, not directly to localities, so that the health programs of counties and other local units can be efficiently coördinated with the state program. These grants-in-aid can properly be made contingent upon adherence to certain controlling standards of performance, but states should not have any single federal pattern imposed upon them. They should be free to develop their own methods of approach to their local problems.

A national health program should be operated by a coöperative utilization of the forces of government, the medical profession, and voluntary social groups.

In both the service and support of existing hospitals and health agencies, the Federal Government should not draw a severe line of difference between voluntary hospitals and health agencies and governmental units. Both should be fostered in the national effort to raise the general health level.

The now rapidly growing voluntary non-profit health and hospital insurance plans may be developed to meet the problem of medical and hospital costs quite as effectively as governmentally directed plans could possibly be. They are more flexible and more readily adaptable to varied and changing conditions. Giving these voluntary plans a full trial, under helpful stimulus from government leadership, will develop a fund of administrative and actuarial experience which is now lacking.

Beyond a Health Program

As in other fields, the problem of health conservation can be met only in part by the provisions of a health program. Better medical care, more doctors, better hospital facilities, even reduced medical and hospital costs are but part of the answer.

The cost of medical care, even at the present level, would not present the problem it does if the enterprise of the nation was in high gear, producing at capacity, and distributing the goods, services, and necessary buying power upon which a high standard of life depends. What government does, therefore, to stimulate an expansion of American enterprise, with the full employment involved, is an important part of a health program. It will be removing causes instead of treating effects.

The Social Services and the Federal Budget

The plain fact is that the federal government is not now in position to add to its already staggering expenditures substantial new outlays on the important social services of government. Expenditures in these fields must come out of reductions in existing expenditures which the present administration has been making on matters of less importance to the welfare of the people and out of the increased national income that will follow a full restoration of American enterprise. Meanwhile, rational policy must consolidate and perfect existing services and realistically prepare for advances on a financially feasible basis.

State Action and Social Action

Throughout the world a sweeping transfer of functions from social action to state action has been taking place. The balance between social power and state power is being fundamentally altered. Public initiative is being substituted for private initiative in larger and larger areas of enterprise.

In the basic fields of health conservation, of preventive and remedial medicine, of education, and of the social services in general, this shift from voluntary social agencies to state agencies has gone steadily on. As this shift takes on the force of a world trend, it becomes important to safeguard the values that belong to voluntary social agencies and the action of voluntary social groups. A nation loses if the sense of social responsibility of its citizens is confined to the payment of taxes and their social conscience expressed, in the main, by proxy through federal agents.

We have heard much of the necessity for a public "yardstick" by which to measure the justice of price and policy in the utility field. It is imperative that we have private "yardsticks" by which to measure the objectives and standards of those social services for which government properly assumes responsibility. This is why, throughout this discussion of the social program of government, this Committee has sought to preserve a saving balance between governmental and voluntary agencies.

It should be kept in mind that many persons assisted in the drafting of this report, and that of necessity there was compromise. Some 200 individuals from all parts of the country served on the Program Committee. They represented the viewpoints of all groups, as far as possible, within the Republican Party. Each one undoubtedly had some opinion in regard to what the role of the Federal Government should be in a national health program.

Dr. Arthur C. Christie of Washington was a member of the Committee.

CANCER CONTROL: EARLY IS THE WORD*

Clarence C. Little, Sc.D.

Managing Director, American Society for the Control of Cancer

Cancer is a curious foe. Second only to heart trouble as a killer and most feared of all causes of death, cancer is in its early stages one of the most curable of serious diseases. Its definite diagnosis requires the services of a highly trained pathologist, but early symptoms which may mean the disease is present are easily recognized by any alert individual. Once cancer is diagnosed the preferred treatment is by a group of specialists, and yet the key man in the whole picture of cancer control is the general practitioner to whom patients come for periodic examinations or for advice about apparently harmless conditions. While late cancer causes considerable suffering, in the early stages it is nearly always painless.

It is fitting that this paradoxical disease should be fought by an Army, not chiefly of men but of women, an Army not of destruction but of education, and its war should be a war to save life. Four years ago a small group of physicians, research workers, and club women launched the Women's Field Army of the American Society for the Control of Cancer. Its goal was to reduce cancer mortality and to arouse the interest of men and women everywhere in this disease and the methods and facilities available in their communities for treating and controlling it. Between one third and one half of those who now die could and should be saved by early diagnosis and prompt treatment, declared the American Society for the Control of Cancer.

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* The American Society for the Control of Cancer through organized units of its Women's Field Army will conduct during April its fourth annual campaign of cancer education. President Roosevelt will issue a proclamation calling attention to the need to "Fight Cancer with Knowledge." This editorial contains the program of the Women's Field Army of the Society.

The growth of the Women's Field Army has been rapid. Divisions are now under way in forty-six states; cancer information centers—local units of the Army—have been established in more than half the counties of the country. Cancer control is receiving more attention than ever before.

A beginning has been made, but only a beginning in this peacetime war. Approximately 150,000 men, women and children were destroyed by cancer in 1939. The needs in the field are great: more clinics, more funds for research, more facilities for indigent patients, and above all, more education for the general public.

Working under the supervision of physicians and other experts, women are the leaders and organizers of the fight against cancer. However, the most paradoxical thing about this complex disease is that we cannot leave its control to leaders, to research workers, or to medical men. We must all do our bit.

The Field Army suggests three measures that each one may adopt and so play a part in cancer control:

1. Have a comprehensive physical examination once a year, however well one feels. Women over thirty-five years of age should have what the American Society calls the B.P. Examination, covering the breast and pelvic areas, semi-annually.

2. Memorize the cancer danger signals, early and usually painless symptoms that may mean the disease is present and should always mean a visit to a physician. They are: any persistent lump or thickening, particularly in the breast; any irregular bleeding or discharge from any body opening; any persistent and unexplained indigestion; any sore that does not heal normally, especially about the tongue, mouth or lips; any sudden change in the form or rate of growth of a mole or wart.

3. Enlist in the Women's Field Army in April, set aside by Special Act of Congress as Cancer Control Month, and so help the Army carry on its work of education to save lives.

Educate, Save, Enlist. These are the imperatives of the war against this disease. One more word should be emphasized. It occurs in this editorial many times. The word is *Early,*—and *Early Is the Watchword in Cancer Control.*

THE EDUCATIONAL QUALIFICATIONS OF HEALTH OFFICERS*

The type of training most desirable for an individual seeking to become a health officer is well recognized. He should have had fundamental training in the sciences and the humanities at least equivalent to that required for a college degree in Arts or Science. He should have completed the course leading to the degree of Doctor of Medicine in a recognized medical school, and should have had at least one year of internship in an approved general hospital, including a communicable disease service. In addition to such internship the candidate should be given a preliminary period of supervised field experience in a well organized department of health for a period sufficient to give him acquaintance with the general aspects of public health, and to give him also opportunity to determine something of his own liking for the work and his fitness for it. At the end of this preliminary field experience the candidate should receive at least one full academic year of graduate instruction in public health in a university. If possible the candidate should have an additional year of practical experience in a subordinate position before becoming himself responsible for the conduct of the work of a department of health.

However desirable so complete a course may be, it is impracticable at this time to insist that all candidates for appointment comply with these requirements. In view of this practical situation, some modification may temporarily be made in the direction of recognizing the value of practical field experience obtained under competent supervision as in some measure substituting for formal education.

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* Approved by the Governing Council of the American Public Health Association, October 18, 1939, on recommendation of the Committee on Professional Education.

Certain individuals not possessing a medical degree have achieved success as administrative health officers. It is reasonable, therefore, that the basic training represented by the medical degree, although advisable, need not necessarily be considered absolutely essential in the selection of health officers for jurisdictions where the duties of the health officer are mainly administrative, provided the candidate possesses an adequate general and biological education, has received not less than 2 academic years of graduate instruction in public health, and has had one or more years of administrative experience in some position in a recognized health organization as prerequisite for the duties of health officer.

Because of the unmistakable trend upon the part of governmental bodies to insist upon the medical degree as a prerequisite to appointment as health officer, and because it is impossible to foresee whether the prospective health officer will be located in a health department where his duties are restricted to administrative functions, it is inadvisable to encourage the candidate for a public health degree to look forward to a career as health officer unless he is also the possessor of a medical degree, and for these reasons our recommendations contain no reference to the non-medical health officer.

Recommendations

1. That candidates for appointment as health officer should be graduates of approved medical schools who have completed successfully not less than one year of internship in an approved hospital and in addition a course of not less than one year of graduate instruction in a university, leading to a degree in public health.*

2. That recognition be given to the fact that practical experience in public health administration is an essential part of the education of a health officer, and that great achievement can usually be attained only after long experience. These facts should always be taken into consideration in the selection of health officers, particularly where the position is one of great administrative responsibility.

The above recommendations are made for the future guidance of officials responsible for the appointment of health officers, and for the guidance of individuals looking forward to careers in public health. In making these recommendations the American Public Health Association expressly recognizes the professional standing of persons now performing creditable service as health officers.

RED CROSS ENROLLS MEDICAL TECHNOLOGISTS

At the request of the Surgeon General of the Army and in compliance with its policy of coöperation with both the Army and Navy, the American Red Cross, as an expansion of its peace-time service for the military forces, has undertaken the enrollment of various types of medical technologists who are willing to serve in the medical departments of the Army and Navy if and when their services are required at the time of a national emergency.

Persons with the following qualifications will be enrolled:

Chemical Laboratory Technicians (male)
Dental Hygienists (male and female)
Dental Mechanics (male)
Dietitians (male and female)
Laboratory Technicians (male and female)
Meat and Dairy Hygienists (Inspectors) (male)
†Nurses (male)

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* Where lack of qualified personnel makes it impossible to require a full year of graduate instruction in public health, the postgraduate requirements considered temporarily as applicable for medical health officers for small jurisdictions may be: the satisfactory completion of not less than 3 months of postgraduate instruction in public health in a university, and not less than 3 months of supervised field experience in a well organized health department. Such individuals should be required to complete the course leading to a graduate degree in public health as soon as they have demonstrated ability sufficient to warrant such instruction.

† This group will not be members of the Army or Navy Nurse Corps which under basic law are limited to females, but will be used as technologists for service auxiliary thereto.

Occupational Therapy Aides (male and female)
Orthopedic Mechanics (male)
Pharmacists (male and female)
Physical Therapy Technicians (Aides) (male and female)
Statistical Clerks (male and female)
X-Ray Technicians (male and female)

General qualifications for enrollment are as follows:

1. Citizens of the United States.
2. Ages 21-45 years (Army); 18-35 (Navy—*men only*)
3. Physically qualified. Applicants must pass a satisfactory physical examination, according to standards set respectively by the Army and Navy Medical Departments.
4. Women applicants must be unmarried.
5. All applicants must express a willingness to serve as a technologist in time of a national emergency.

Male technologists will be eligible for enlistment in the Army as non-commissioned officers in the grades of sergeant, staff sergeant, or technical sergeant. Women technologists, and men who do not qualify physically, will be eligible for employment by the Army as civilians.

For the Navy, male technologists will be eligible for enlistment in the Naval Reserve as Petty Officers —Pharmacist's Mates 3d, 2nd, and 1st Class and Chief Pharmacist's Mate (acting appointment). Women technologists are not eligible for service in the Navy under present plans.

The Medical Department of the Army will require a considerable number of technologists in each of the above named groups. The Navy Medical Department requirements will be similar except for dietitians, occupational therapy aides, orthopedic mechanics and dairy and food hygienists (inspectors) who will not be needed. Notwithstanding the maintenance of this enrollment, the Navy also desires peace-time enlistment in the U. S. Naval Reserve, and male technologists who wish to enlist in the Naval Reserve are urged to communicate direct with the Commandant of the Naval District in which they reside. The address of their Commandant will be furnished upon request.

Technologists who qualify according to these general standards and who are willing to enroll for service as outlined above should communicate with The American National Red Cross, Washington, D. C.

FUNDS FOR FINLAND

The Finnish Relief Fund, Inc., sponsored by Mr. Herbert Hoover and approved by the Finnish Minister in Washington, His Excellency Hjalmar Procopé, has for its main purpose the acceptance for the Finnish people and transmittal to Finland of any funds contributed to this great cause by the American people.

Contributions, unless specifically intended to be used for war material, will be used for food and clothing for the Finnish civilian population, many of whom have suddenly been made homeless by having their houses irreparably demolished by the incendiary bombs from Russian airplanes.

Members of the American Medical Association are the only doctors who will be asked to contribute through this Fund. It is hoped the profession will respond as generously as possible and that every doctor will make some contribution. No matter how small it may be, it will be gratefully accepted.

No money is deducted for expenses from any contribution made through this Fund; every dollar donated arrives in Finland worth one hundred cents. No salaries are paid and no financial remunerations are made to officers on duty with the Finnish Relief Fund. Expert auditors make a daily check-up of the donations acquired and chart the results.

Dr. John Frederick Erdmann of New York is the National Chairman of the Medical Division of the Professional Groups of the Finnish Relief Fund, Inc. A director (chairman) for the Medical Division has been or will be appointed from each state, who will try to get in touch with every member of the American Medical Association of that state by such method as he deems best. Dr. Kerwin W. Kinard is Executive Director of the Medical Division and has offices at Fund Headquarters.

All checks should be made payable to the Finnish Relief Fund, Inc., and sent to the Medical Division of the Finnish Relief Fund, Inc., 420 Lexington Avenue, New York City.

RADIO PROGRAMS

Listed below are the radio programs which the Committee on Radio Education has presented over Station WMAL each Tuesday at 11:45 a. m. since January 1. Except as indicated, these talks have been given by the Chairman of the Committee, Dr. Roy Lyman Sexton.

January 2: "New Year's Resolutions"
January 9: "Pneumonia"
January 16: "Physical Examination of Children"
January 23: "The Baby Swallowed a Safety Pin"
January 30: "Colds and Their Complications"
February 6: "High Blood Pressure"
February 13: "Basal Metabolism"
February 20: "The Business of Health"
Dr. Herbert P. Ramsey and Mr. Theodore Wiprud
February 27: "Cancer"
March 5: "Headaches"

MEETINGS

Wednesday, April 3: Business meeting.

Wednesday, April 10: The Washington Heart Association will present a lecture by Hugo Roesler, M.D., Associate Professor of Radiology, Temple University School of Medicine, Philadelphia. Dr. Roesler, who has an international reputation as roentgenologist of cardiovascular disease, has chosen for his subject, "Some Roentgenological Aspects of Cardiovascular Disease."

Wednesday, April 17: The District Tuberculosis Association will sponsor a Symposium on Tuberculosis, arranged by the District of Columbia Bureau for Tuberculosis, with the following speakers:

W. Warriner Woodruff, M.D., F.A.C.S., Saranac Lake, N. Y., who will speak on the surgical aspects; John N. Hayes, M.D., Saranac Lake, N. Y., who will discuss the clinical side; James B. Amberson, M.D., F.A.C.P., Professor of Medicine, Columbia University College of Physicians and Surgeons, who will talk on the public health aspects of tuberculosis.

Wednesday, April 24: Presidential Address. "Progress and Personalities in Early French Surgery," John Hugh Lyons, M.D.

Wives are invited to attend this meeting. A buffet supper will be served.

MEMBERSHIP

The following applicants were duly elected to membership at the business meeting, February 7, 1940:

Active Members

Thomas J. Ready, 3301 N Street, N. W.
John Beverly Smith, 1222 Monroe Street, N. E.

Associate Members

Virginia Patterson Beelar, 2222 Eye Street, N. W.
Frederick Daniel Suttenfield, 4900 16th Street, N. W.

The following applicants for membership will be voted on at the business meeting, April 3, 1940:

For Active Membership

John Gordon Bell, Medical College of Virginia—1933
Benjamin James Mundell, Georgetown University—1934
Samuel Zola, George Washington University—1936

For Associate Membership

Harlon W. Harrison, University of Rochester—1934
Walter Arthur Rath, New York University—1920
John Alfred Reisinger, University of Pennsylvania—1926

Recent changes in membership status:

Reinstated to Active Membership

Frederick Young Donn
Roy F. Higgins
Paul Abraham Lichtman
Miles Parker Omohundro
George Walter Warren

Reinstated to Associate Membership

Frank W. Govern

Resigned

Active Member

Maurice Lyndon Townsend

Associate Member

Henry Clay Coburn, Jr.

NEWS AND PERSONALS

The Eighth American Scientific Congress will be held in Washington, D.C., May 10 to 18, 1940, under the auspices of the U. S. Government. Invitations have been extended to the governments of the American Republics, members of the Pan-American Union, to participate in the forthcoming meeting. Scientific institutions and organizations are also cordially invited to send representatives.

The Congress will be divided into the following sections: Anthropological Sciences, Biological Sciences, Geological Sciences, Agriculture and Conservation, Physical and Chemical Sciences, Statistics, History and Geography, International Law, Public Law and Jurisprudence, Economics and Sociology, and Education.

The Honorable Sumner Welles, Under Secretary of State, will serve as Chairman of the Organizing Committee which is collaborating with the Department of State in formulating definite plans for the Congress. Dr. Alexander Wetmore, Assistant Secretary of the Smithsonian Institution, will serve as Secretary of the Committee and Secretary-General of the Congress.

On April 14, 1940, the Pan-American Union will celebrate the 50th anniversary of its founding, and the Scientific Congress, although convening a few weeks subsequent to the anniversary date, will be one of the phases of that celebration. It is hoped that the presence in Washington of many distinguished scientists of all of the American republics as participants in this Congress will serve as one of the many tributes to the Pan-American Union on the occasion of celebrating the completion of a half century of invaluable service in the fostering of good will and better understanding among the republics of the Western hemisphere.

The American College of Physicians will convene for its 24th Annual Session in Cleveland from April 1 to 5, inclusive. An outstanding program has been arranged to be participated in by 274 individuals, coming from 38 cities, 22 different states, and the provinces of Canada. The program is varied, with some attention given to such allied specialties as psychiatry, industrial medicine, roentgenology, pathology, pediatrics, endocrinology, and urology and surgery as related to medicine. Panel discussions will be held on various subjects. Special clinics and demonstrations will be given at the important hospitals of Cleveland.

All Fellows and Associates are urged to be present at the meeting. Physicians who are non-members are invited to attend although they must pay a registration fee of $12, which will entitle them to one year's subscription to the *Annals of Internal Medicine* in which the proceedings will be published.

Postgraduate courses have been arranged again this year. They are offered especially for Fellows and Associates of the College, but where facilities are available they are open to those preparing to meet requirements for membership in the College or certification by the American Board of Internal Medicine. Members of the College will be entitled to participate at a minimum cost. The registration fee for each two-week course is $40; for each one-week course, $20.

Courses will be held at the University of Michigan Medical School and University Hospital, Ann Arbor, Michigan, on general medicine; at the Henry Ford Hospital, Detroit, Michigan, on industrial medicine; at the Roosevelt Hospital, New York City, on allergy; and at the University Hospitals, State University of Iowa, Iowa City, on cardiovascular diseases. All courses will be held during March prior to the meeting of the College in Cleveland.

For further information address Dr. Wallace M. Yater, Governor for the District of Columbia.

The American Board of Internal Medicine will conduct oral examinations just previous to the meeting of the American College of Physicians in Cleveland and just in advance of the meeting of the American Medical Association in New York City.

Applicants who have successfully passed the written examination and plan to take the oral examination in 1940 should advise the office of the Secretary at least six weeks in advance of the date of the examination they desire to take.

The next written examination for 1940 will be given on October 21. Applications for this examination must be filed in the Secretary's office by September 1. Application forms may be obtained from Dr. William S. Middleton, Secretary-Treasurer, 1301 University Avenue, Madison, Wisconsin.

The United States Pharmacopoeial Convention for the Revision of the U. S. Pharmacopoeia will be held in Washington beginning May 14, 1940. Eligible organizations and colleges are requested to send their credential blanks to the Secretary of the Convention, Mr. L. E. Warren, M.Sc., 2 Raymond Street, Chevy Chase, Maryland. The Board of Trustees has asked that credentials be filed with the Secretary of the Convention before March 15, 1940.

The American Association of Obstetricians, Gynecologists, and Abdominal Surgeons is again awarding the **Foundation Prize** of $150. Eligible contestants shall include only (a) interns, residents, or graduate students in Obstetrics, Gynecology or Abdominal Surgery, and (b) physicians (with an M. D. degree) who are actively practicing or teaching Obstetrics, Gynecology, or Abdominal Surgery.

Manuscripts must be limited to 5,000 words, typewritten, double-spaced, only one side of the sheet being used. Papers must also be submitted under a nom de plume. Three copies of the thesis and illustrations should be sent to the Secretary of the Association, Dr. James R. Bloss, 418 Eleventh

Street, Huntington, West Virginia, before June 1, 1940.

The District of Columbia members of the **American Academy of Pediatrics** will be hosts to Region 1 of the American Academy of Pediatrics at its Annual Meeting on April 4, 5 and 6, 1940 at the Mayflower Hotel, Washington.

Below is a partial list of the scientific papers to be presented:

"Multiple Vitamin B Complex Deficiencies," W. H. Sebrell, M.D.
"Human Riboflavin Deficiency," R. E. Butler, M.D.
"Experimental Vitamin B_6 and Filtrate Factory Deficiencies with Possible Clinical Application," Floyd Daft, M.D.
"Clinical Tests for Vitamin B Complex Deficiencies," H. F. Fraser, M.D.
"A Report of Clinical Experiences with Meningococcus Meningitis," John H. McLeod, M.D., and Sara Branham, M.D.
"Influenzal Meningitis," E. Clarence Rice, M.D., and Janvier W. Lindsay, M.D.
"Acute Benign Lymphocytic Meningitis," Charles Armstrong, M.D.
"Skin Diseases in Childhood," H. F. Anderson, M.D.
"Evaluation of the Vollmer Patch Test," Hugh J. Davis, M.D.
"Lipodystrophy," P. A. McLendon, M.D.
"The Diagnosis and Treatment of Accommodative Squint in Children," William Thornwall Davis, M.D.
"Formalinized Vaccinia Virus; Results of Its Use with Children Who Had Never Previously Been Vaccinated," H. H. Donnally, M.D., and A. J. Weil, M.D.
"Studies of Fat Absorption by Premature Infants—Clinical Implications," Harry H. Gordon, M.D.
"New Knowledge in the Diagnosis and Epidemiology of Oxyuriasis," Eloise B. Cram, Ph.D.
"Treatment and Control of Some Parasitic Diseases of Childhood," Willard H. Wright, Ph.D.
"A Program of Care for Crippled Children," Robert C. Hood, M.D.
"Roentgen Therapy in Sinus Disease," R. R. Rathbone, M.D.
"Ocular Findings in the New Born," F. D. Costenbader, M.D., and A. L. Karwoski, M.D.
"An Analysis of Eighteen Cases of Rocky Mountain Spotted Fever in Children," Harry A. Ong, M.D., and Joseph F. Raffetto, M.D.
"Distribution and Prevention of Rocky Mountain Spotted Fever," R. E. Dyer, M.D.
"Congenital Heart Disease," Margaret M. Nicholson, M.D.
"Congenital Cardiac Abnormalities Simulating Thymic Stridor and Related Disorders," Charles A. Schutz, M.D.
"Rheumatic Diseases in Childhood," M. P. Schultz, M.D.
"Peptic Ulcer in Childhood," C. B. Conklin, M.D., and William F. Burdick, M.D.
"Endemic Fluorosis and Dental Caries," H. T. Dean, D.D.S.
"Recurrence Following Estrogenic Treatment of Vulvovaginitis," Bernard Notes, M.D.
"Inclusion-Body Blennorrhea," William A. Howard, M.D.
"The Control of Biological Products Used in Pediatric Practice," W. G. Workman, M.D.

Exhibits, both technical and scientific, will be on display in the Promenade, the Chinese Room and the Pan-American Room of the Mayflower. The scientific exhibits are being presented through the coöperation of the National Institute of Health, the George Washington University School of Medicine, Children's Hospital and the Children's Bureau.

On Thursday evening a banquet will be held in the Grand Ballroom. On Friday at 7:00 p.m. there will be a dinner for state chairmen through the courtesy and by invitation of the staff of the Children's Bureau of the U. S. Department of Labor. Fellows, registered guests and their wives will be received at the White House by Mrs. Franklin D. Roosevelt Saturday afternoon. A number of special sightseeing tours have also been planned for physicians and guests who attend this meeting.

For further information address the Steering Committee Chairman, Dr. Harry A. Ong, 1801 Eye Street, N.W., Washington.

The George Washington University School of Medicine announces a course on **Aviation Medicine and Ophthalmology** to be given April 1 to 6, inclusive. Items on the program are as follows:

"History and Development of Aviation Medicine."
"Physiologic Problems Incident to Military and Commercial Flying," Commander J. C. Adams, Medical Corps, U.S.N., Flight Surgeon in Charge of Division of Aviation Medicine, Bureau of Medicine and Surgery, Washington, D. C.
"Vision and Accommodation," Lt. Col. Robert K. Simpson, Medical Corps, U. S. A., Station Surgeon, Mitchel Field, N. Y.
"Motility of the Eye," Lt. Col. Frederic H. Thorne, Medical Corps, U. S. A., Chief of Eye Service, Walter Reed General Hospital, Washington, D. C.
"Stereopsis and Depth Perception," Lt. Comdr. Clifford A. Swanson, Medical Corps, U. S. N., Naval Dispensary, Washington, D. C.
"Color Vision and Night Blindness," Commander Carl J.

Robertson, Medical Corps, U. S. N., Instructor, Eye, Ear, Nose and Throat, U. S. Naval Medical School, Washington, D. C.

"The Fundus of the Eye," Major John M. Hargreaves, Medical Corps, U. S. A., Instructor in Ophthalmology, School of Aviation Medicine, Randolph Field, Texas.

"Cardiovascular System in Aviation," Commander B. Groesbeck, Medical Corps, U. S. N., Flight Surgeon and Senior Medical Officer at U. S. Naval Air Station, Norfolk, Va.

"Refraction as Applied to Aviation," Major John M. Hargreaves, Medical Corps, U. S. A., Instructor in Ophthalmology, School of Aviation Medicine, Randolph Field, Texas.

"Otolaryngology as Applied to Aviation."

"Equilibration," Commander J. R. Poppen, Medical Corps, U. S. N., Flight Surgeon in Charge of Physiologic Research for Aviation, Bureau of Aeronautics and Bureau of Medicine and Surgery, Washington, D. C.

"The General Physical Examination," Lt. Col. David N. Grant, Medical Corps, U. S. A., Chief, Medical Section, Office, Chief of Air Corps, Washington, D. C.

"Psychologic Aptitude as Applied to Aviation," Lt. Comdr. Rex H. White, Medical Corps, U. S. N., Flight Surgeon, Naval Air Station, Pensacola, Florida.

"Fatigue."

"Safety Appliances and Emergency Measures in Accidents," Capt. Harry G. Armstrong, Medical Corps, U. S. A., Director, Aero-Medical Research Laboratory, Wright Field, Dayton, Ohio.

"Structural and Other Disqualifying Defects," Dr. Eldridge Adams, Chief, Medical Section, Civil Aeronautics Authority, Washington, D. C.

"Administration in Commercial Aviation," Dr. Walter A. Ostendorf, Senior Medical Officer, Civil Aeronautics Authority, Washington, D. C.

"Administration in Commercial Aviation," Dr. Wm. R. Stovall, Senior Medical Officer, Civil Aeronautics Authority, Washington, D. C.

"The Human Element in Airplane Crashes," Lt. Col. Malcolm C. Grow, Medical Corps, U. S. A., Assistant Surgeon and Flight Surgeon, Langley Field, Hampton, Va.

"Military and Naval Administration," Commander Eben E. Smith, Medical Corps, U. S. N., Flight Surgeon in Charge of Divisions of Publications, Bureau of Medicine and Surgery, Washington, D. C.

Changes in the program for the **Postgraduate Course in Ophthalmology,** which will be given by the George Washington University School of Medicine March 25 to 30, have just been announced. Due to the sudden death of Dr. A. Bielschowsky, one of the speakers who was scheduled for twelve lectures, Dr. Hermann M. Burian, Hanover, N. H., Dr. Ramon Castroviejo, New York, N. Y., and Dr. Wendell L. Hughes, Hempstead, L. I., N. Y. will substitute.

The Speakers' Bureau is called upon frequently for speakers by various organizations in the District and a number of appreciative letters have come to the Society's office commending the physicians for their splendid talks. Listed here are some of those who have responded recently to requests for program assistance:

November 29, 1939 Home Hygiene Class, Y.W.C.A.
"Cancer—Its Prevention and Control," Dr. Eugene R. Whitmore

January 17, 1940 Woodrow Wilson High School Students
"Vocational Guidance," Dr. Henry B. Gwynn

February 16, 1940 Petworth Women's Club
"Dangerous Joints (Arthritis)," Dr. Darrell Crain, Jr.

February 20, 1940 Bunker Hill School P.T.A
"The Sign on Your Door," Dr. James G. Cumming

February 21, 1940 Jewish Consumptive Relief Society
"The Dangerous Forties," Dr. Kate B. Karpeles

February 27, 1940 Optimist Club of Washington
"Fair, Fat and Forty," Dr. James A. Gannon

February 27, 1940 Jewish Consumptive Relief Society
"A Baby Is Expected," Dr. Jerome F. Crowley

March 1, 1940 Chevy Chase Women's Club
"The 8-point Platform of the A.M.A.," Dr. Henry C. Macatee

The Section on Ophthalmology and Otolaryngology met February 16 and presented the following program: "Deafness in Children," Dr. Leroy Polvogt, Johns Hopkins University Medical School; "Unusual Case of Septal Abscess with Polypoid Degeneration," Dr. Victor R. Alfaro.

The Section on Pediatrics met February 29 and presented the following program: "Analysis of Eighteen Cases of Rocky Mountain Spotted Fever in Children," Drs. H. A. Ong and Joseph F. Raffetto; "Distribution and Prevention of Rocky Mountain Spotted Fever," Dr. R. E. Dyer; "Meningococcic Meningitis," Drs. John H. McLeod and Sara E. Branham; "Peptic Ulcer in Children," Drs. Coursen B. Conklin and William F. Burdick; and "Lipodystrophy," Dr. P. A. McLendon. A moving picture picture portraying the life history of the tick was shown.

The Section on Neurology and Psychiatry presented the following program March 7: "Self-inflicted Bullet Wound of Frontal Lobes in a Depression with Recovery," Dr. Zigmond Lebensohn; "The Psychiatric Aspects of Urological Conditions with the Report of a Case of Diurnal Urinary Incontinence in an Adult," Dr. Benjamin Karpman.

The Medical Society of St. Elizabeths Hospital will hold its third annual meeting on April 20. A business meeting and election of officers will be held at 11:30 a.m. Dr. and Mrs. Winfred Overholser will be hosts to members and guests at luncheon. Dr. Solomon Katzenelbogen will serve as chairman for the scientific session beginning at 1:30 p.m. and papers will be presented by Drs. Armando Ferraro, George A. Jervis, Bernard Glueck, Lawrence Kolb, Arthur P. Noyes and Winfred Overholser.

The meeting will close with a dinner at the Mayflower Hotel, at which time an address will be given by the Honorable A. A. Berle, Jr., Assistant Secretary of State.

The Syphilis Journal Club will hold its next regular meeting April 5 at the home of Health Officer George C. Ruhland, 1875 Plymouth Street, N.W. The following program will be presented: "Personal Prophylaxis," Dr. H. H. Hazen; "A Review of the Literature on the Diagnosis of Uncomplicated Syphilitic Aortitis," Dr. G. M. Leiby.

The George Washington University Medical Society will hold its next meeting March 16 at 8:00 p.m., at which time Dr. Russell L. Cecil, Professor of Clinical Medicine, Cornell University Medical College, New York City, will speak on "The Present Status of the Arthritic Problem."

The Washington Ophthalmological Society will hold its annual meeting in conjunction with the postgraduate course in ophthalmology of the George Washington University School of Medicine on March 25 at 8:00 p.m. This meeting will convene in the auditorium of the Medical Society Building.

The Washington Academy of Surgery announces its last meeting of the season for Friday, April 12, in the library of the Medical Society Building. Election of officers will take place.

The Jacobi Society will meet April 15. Dr. Joseph Dessoff will present a paper on "The Eye and Certain Related Functional Disturbances." Dr. Irving Burka will also speak.

The Washington Medical and Surgical Society will hold its next meeting March 25. Dr. Howard Parker will present a paper and a case report will be given by Dr. W. Ross Morris.

The Medical Society of St. Elizabeths Hospital held one of its quarterly meetings at the hospital on January 22, 1940, at which time Dr. Herbert C. Woolley, Superintendent of the Philadelphia State Hospital and of the Pennhurst State School, spoke to the society concerning his experiences and problems at the Philadelphia State Hospital since he assumed the superintendency there several months ago. Dr. Woolley was formerly First Assistant Physician of St. Elizabeths Hospital.

The Washington Society of Pathologists presented the following program at the Army Medical Museum on February 3: "Breast Tumor," Lt. Col. J. E. Ash; "Lesion of the Heart," Dr. Thomas Peery; and "Lesion of the Central Nervous System," Dr. Robert Groh.

The next meeting will be held Saturday, April 6, 1940.

At the annual banquet of the **George Washington University Medical Society** held at the Mayflower Hotel on February 17, Secretary of the Interior Harold W. Ickes gave an address on "Conservation." Dr. Arnold McNitt, President of the society, presided at the banquet. The dinner celebrated the twentieth reunion of the Class of 1920. Dr. Herbert P. Ramsey, in behalf of the class, presented the Medical School with a motion picture screen, which was acknowledged for the school by Dr. Walter A. Bloedorn, Dean.

The Woman's Auxiliary to the American Medical Association will hold its 18th annual convention in New York City June 10 to 14, 1940 with headquarters at the Hotel Pennsylvania. In view of the fact that the second edition of the World's Fair will accelerate advance hotel reservations, it is urged that reservations be made immediately through the

Housing Bureau which has been set up by the American Medical Association, namely, Dr. Peter Irving, Room 1036, 233 Broadway, New York City.

The Woman's Auxiliary to the Medical Society of the District of Columbia held its regular meeting March 6 in the library of the Medical Society Building. Dr. William Hoge of the National Institute of Health was the speaker.

The Health Lecture Committee for the Central Y.M.C.A. scheduled the following series of lectures for February and March: February 5—"Your Vision and How to Keep It," Dr. Ernest Sheppard; February 12—"Colds, Influenza, Pneumonia," Dr. Theodore J. Abernethy; February 19—"Stomach and Intestinal Disorders," Dr. William M. Ballinger; February 26—"Some Aspects of Mental Hygiene," Dr. Winfred Overholser; March 4—"How to Keep Young After Forty," Dr. William H. Beard; March 11—"Public Health Problems in Washington," Dr. M. P. Isaminger; March 18—"Sleep—Why We Need It and How to Get It," Dr. Walter Freeman; and March 25—"The Care of the Skin and Hair," Dr. Russell J. Fields.

The Health Security Administration completed its fifth year of service on January 23. Recently it moved to 1823 L Street, N.W., a more central location than it held previously.

The centennial celebration of the founding in 1840 of the first dental school, **the Baltimore College of Dental Surgery,** since merged with the University of Maryland, will be held in Baltimore March 18, 19, 20, 1940, with headquarters at the Lord Baltimore Hotel.

The Washington Council of Social Agencies considered mental health problems at their luncheon February 19 at the Y. W. C. A. Speakers were Drs. Dorothy V. Whipple, Joseph L. Gilbert, Winfred Overholser, James Lewald, and the Honorable Edward M. Curran, Judge of the District Police Court. Dr. Paul Ewerhardt presided at the meeting.

The Incubator Fund, Inc., under the chairmanship of Dr. Edward M. Pickford, held a benefit dance at the Kennedy-Warren on the evening of February 22 for the purpose of raising funds to provide incubators for local hospitals. The Incubator Fund, Inc., hopes to supply with incubators all the Washington hospitals caring for obstetrical cases. Sibley Memorial Hospital at present has 12 incubators donated by the Variety Club. Members of the Visiting Medical Staff at Providence Hospital recently purchased an incubator. There are no others in the metropolitan area.

The Twentieth Century Club of Washington has recently donated equipment for a new occupational therapy room for children at the Gallinger Hospital. This is intended for patients in the crippled children's ward. The project was instituted to celebrate the Club's Golden Jubilee and more than $2,000 was raised for the equipment. The Club has also donated a children's library for the children's ward. Books will be furnished by the public library and the Club will pay a librarian for services one day a week.

Dr. Eugene Forcione served at the **Washington Self-Help Exchange** during January and **Dr. Cyrus R. Creveling** served at the **Goodwill Industries** during the same month.

Dr. Oscar B. Hunter has been appointed a member of the Council of the Southern Medical Association from the District of Columbia for a regular Council term of five years, according to an announcement made recently by the President, Dr. Arthur T. McCormack, Louisville, Kentucky. Dr. Hunter succeeds Dr. William Thornwall Davis, who, having served the constitutional limit, was not eligible for reappointment.

Dr. Arthur C. Christie will give the Hickey Memorial Lecture April 1 at Detroit upon invitation of the Wayne County Medical Society.

Dr. Benjamin Rones addressed the first of a series of round table discussion meetings January 25, held under the auspices of the District Society for the Prevention of Blindness, at the Nurses' Home of the Episcopal Eye, Ear and Throat Hospital.

Dr. Norvell Belt has been appointed a Diplomate of the American Board of Urology, certification having been received upon successful completion of the 1940 examinations held recently in Chicago.

Dr. A. Ray Dawson spoke at the Thirty-sixth Annual Congress on Medical Education and Licensure in Chicago, February 13, on the subject, "Opportunities for a Medical Career in the Federal Civil Service."

Dr. Russell J. Fields spoke to the Ladies' Board of Garfield Hospital February 15 on the work of the Department of Syphilis.

Drs. Francis A. Ellis and **Hayden Kirby-Smith,** associates of the late Dr. Charles Augustus Simpson, are continuing the practice of dermatology at the same address.

BOOK REVIEWS

Accepted Foods and Their Nutritional Significance. Council on Foods of the American Medical Association. Price, cloth, $2.00. Pp. 512. Chicago: American Medical Association, 1939.

Nutritionists, dietitians, home economics teachers, mothers of growing children and many other persons interested in human nutrition can profit from this new book by the Council on Foods of the American Medical Association. All products accepted by the Council as of September 1, 1939, in all some 3,800 brands, are included, with name of manufacturer, description of manufacturing processes and composition. The various types of foods are conveniently classified, and an important feature of the work is the comprehensive discussion of their nutritional significance. In some cases considerable historical data are presented. An extensive index and alphabetical list of manufacturers make the book exceedingly valuable for reference use. Section headings are: (1) Work of the Council on Foods, (2) Fats and Oils and Their Products, (3) Fruit Juices, Including Tomato Juice, (4) Canned and Dried Fruits and Fruit Products, (5) Grain Products, (6) Preparations Used in the Feeding of Infants, (7) Meats, Fish and Sea Foods, (8) Milk and Milk Products Other Than Butter, (9) Foods for Special Dietetic Purposes, (10) Sugars and Syrups, (11) Vegetables and Mushrooms, (12) Unclassified and Miscellaneous Foods.

Do You Want to Become a Doctor? Morris Fishbein, M.D., Editor, Journal of the American Medical Association. Price, cloth, $1.50. Pp. 176. New York: Frederick A. Stokes Co., 1939.

This little book should be of considerable value to young men considering the study of medicine with a view to entering the medical profession. It gives all of the information necessary to help a young man appreciate all of the factors involved. The headings of the various chapters are (1) Medical Education Today, (2) Preparation for Medical School, (3) Choice of a Medical School, (4) Cost of Medical Education, (5) The Internship, (6) State Licensing Examination, (7) The Specialist, (8) On Beginning Practice, (9) The Accessory Professions, (10) The Future of Medical Practice, (11) The Contribution of Medicine to Public Welfare.

The Vitamins. Price, imitation leather, $1.50. Pp. 637. Chicago: American Medical Association, 1939.

This book constitutes a symposium arranged under the auspices of the Council on Pharmacy and Chemistry and the Council on Foods of the American Medical Association. It is replete with fundamental and authoritative information on the knowledge of vitamins. There are many practical features. Any physician who wishes to bring himself up to date on this subject can do no better than to consult this excellent work.

Handbook of Skin Diseases. Leon Hugh Warren, B.A., M.D., M.Sc. (Med.), formerly Instructor in Dermatology and Syphilology at the School of Medicine, Temple University; Acting Assistant Surgeon (Dermatology) in the office of Dermatoses Investigations of the U. S. Public Health Service; Assistant Dermatologist, Philadelphia Methodist Hospital; member of the Society for Investigative Dermatology; Fellow of the American Academy of Dermatology and Syphilology. Price, cloth, $3.50. Pp. 321. New York: Paul B. Hoeber, Inc., 1940.

This practical guide to diagnosis and treatment of two hundred and fifty-two skin diseases is a small textbook filled with valuable dermatologic information. The chapter on general principles of therapy contains concise, simple and practical measures of invaluable aid to students, general practitioners and dermatologists. The alphabetical arrangement of skin diseases enhances the little book for quick reference.

Each condition is classified as to etymology, synonyms and eponyms, essential nature, diagnostic features, histopathology of the skin, differential diagnosis and treatment. This book can be recommended as an adjunct to student's lectures and as a rapid, brief reference for general practitioners.

I. L. S.

REPRINTS RECEIVED

The following reprints have recently been received for which due acknowledgment is made:

"The Application of Psychoanalytic Psychiatry to the Psychoses." Dexter M. Bullard. Psychoanalytic Review, October, 1939.

"Epiphysitis of the Capitellum of the Humerus." Joseph F. Elward. The Journal of the American Medical Association, February 25, 1939.

"Blepharochalasis." Henry G. Hadley. Separatum Acta Ophthalmologica, Vol. 17, 1939.

"Case of Addison's Disease with Failure of Cortical Extract Therapy—Case Report." Henry G. Hadley. Virginia Medical Monthly, September, 1939.

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LEWIS JUNIUS BATTLE

(1865–1940)

Dr. Lewis Junius Battle, a Life Member of the Medical Society of the District of Columbia, died suddenly February 15 in the office at his home at 1401 Kennedy Street, N.W.

Dr. Battle was born in Raleigh, North Carolina on August 6, 1865. He received his early education at Scott and Mason's Military Academy in that city. In 1886 he received a Ph.B. degree from the University of North Carolina. His degree in medicine was obtained at the University of Pennsylvania in 1893. He moved to Washington to begin active practice in the District in 1895 and for forty years served as Washington physician for the Baltimore and Ohio Railroad.

Dr. Battle took an active part in civic affairs. He was formerly President of the Sixteenth Street Highlands Citizens' Association. He had been active in the old Washington Chamber of Commerce and at one time was connected with the District Health Department.

Dr. Battle became a member of the Medical Association of the District of Columbia in 1895 and a member of the Medical Society of the District of Columbia in 1897. He was granted Life Membership in the Society in 1936. He was also a member of the American Medical Association, a visiting staff member of Casualty Hospital for six years, and assistant visiting physician of Emergency Hospital for three years. He held membership in the Stansbury Lodge of Masons, the Washington Medical and Surgical Society, the Board of U. S. Pension Examining Surgeons and the Sixth Presbyterian Church.

Surviving him are two daughters, Mrs. Mary Battle Bowman and Mrs. Mildred Battle Harvey of Washington, and one son, Richard Polkinhorn Battle of Newark, N. J. His wife, Mrs. Ida Polkinhorn Battle, preceded him in death in 1939.

(*Continued from page 77*)

2. The results evaluated on the basis of relief of pain and stiffness in the acute cases, as well as increase in the range of motion of the cervical spine in the chronic cases, seem to warrant its use.

3. The average period of treatment was two to three days for the acute cases and from three to six weeks for the chronic cases.

4. The traction-manipulation treatment is not harmful if the motions are performed slowly and gently.

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REGIONAL ENTERITIS*

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Regional enteritis is by no means a new affliction of mankind, but rather one that formerly escaped recognition. Prior to the description of this disease in 1932, all granulomas of the large and small intestine were considered in a nondescript group, the etiology of which commonly was assumed to be tuberculous. As early as 1806 Combe and Saunders[1] reported an intestinal lesion that coincides with our present concept of regional enteritis. DeGroot[2] in 1913 described a stenosing lesion of the ileum that he thought to be of syphilitic origin. However, it remained for Crohn and his co-workers[3] in 1932 to segregate from the confused category of intestinal granulomas a distinct clinical entity which they chose to call regional ileitis. Since that time the intense interest manifested in this disease is reflected by the appearance of more than 150 papers dealing with regional enteritis, while the number of reported cases is well over 750.

ETIOLOGY

The etiology of this condition remains unsolved. Since Moschcowitz and Wilensky[4] conclusively established in 1923 that these intestinal lesions are rarely of tuberculous nature, little has been learned concerning the cause. Pumphrey's careful bacteriologic studies[5] failed to demonstrate the presence of any organisms in uncontaminated surgical specimens. Felsen[6] insists that the disease is a residuum of bacillary dysentery, a view not shared by other experienced workers in this field. Obstruction of the lymphatics in the mesentery may be a factor of importance, inasmuch as Reichert and Mathes[7] were successful in producing lymphedema of the intestinal wall of dogs which simulated to some extent the appearance of the involved bowel in regional enteritis, by the injection of sclerosing solutions into the mesenteric lymphatics. As pointed out by Probstein and Gruenfeld,[8] the rich lymphatic network in the region of the terminal ileum may well account for the predilection of the disease for this site. Jackson[9] is of the opinion that low-grade infection, resulting in lymphadenitis and the consequent lymphedema, is of importance in the pathogenesis.

Recalling the not infrequent occurrence of similar intestinal lesions at the time that scrofula was more prevalent, the late W. J. Mayo[10] suggested to me the possible role of the avian or bovine tubercle bacillus in this disease. Acting on this suggestion, I injected a virulent strain of bovine tubercle bacilli into the ileocecal lymph glands of a series of dogs. In a number of animals a hemorrhagic and edematous condition of the small bowel resulted. However, the lesions were quite unlike those seen clinically. More recent culture studies have failed to demonstrate the presence of bovine or avian tubercle bacilli in resected specimens. The similarity of the lesions of regional enteritis and lymphopathia venereum has suggested to some investigators that the two diseases may have a common etiologic agent, namely, a filtrable virus. There is little to support the view that intestinal allergy is the basic disturbance. Bargen and I[11] in 1935 called attention to the similarity of the lesions of chronic ulcerative colitis and regional enteritis, and we suggested at that time that both lesions possibly were manifestations of the same disease.

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* Read before the Society, October 18, 1939.

Pathology

In their original publication, Crohn, Ginzburg and Oppenheimer[3] described a subacute or chronic, nonspecific, hyperplastic inflammation of the terminal 25 to 30 centimeters of ileum which eventuated in stenosis and obstruction of the involved bowel, and they suggested the name "regional ileitis." However, it soon became evident that this concept of the disease should be broadened, since Harris, Bell and Brunn[12] encountered cases with involvement of the jejunum, while Brown, Bargen and Weber[13] demonstrated that the colon may be affected in association with the small bowel. More recently a peculiar patchy distribution of lesions throughout the ileum and jejunum has been reported and, furthermore, cases with involvement of the entire small intestine have been encountered. Consequently the term "regional enteritis," as suggested by Brown, Bargen and Weber, is more commonly employed since it is more inclusive.

Opportunities to study the early pathologic manifestations of this condition have been few, since resection is rarely attempted. However, Erb and Farmer[14] have observed the occurrence of reddening and edema of the ileum with conspicuous regional lymphadenitis which they believe to be an early phase of the disease.

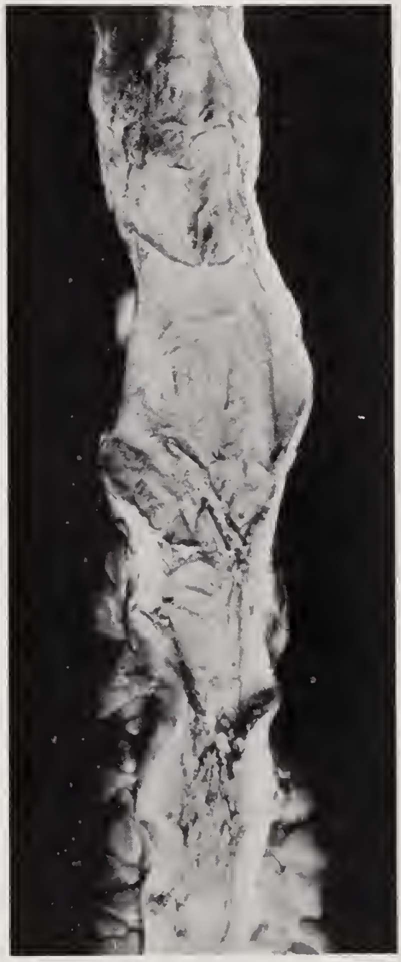

Fig. 1. Regional enteritis; cicatricial narrowing and linear ulcerations of the terminal ileum; dilatation of the intestine above the involved area.

As the condition progresses, cicatricial narrowing of the affected bowel, linear ulcerations of the mucosa, and dilatation of the proximal intestine are observed (fig. 1). Chronic perforation and fistula formation are characterisitic of the more advanced phases of regional enteritis. The rarity of acute perforation of the

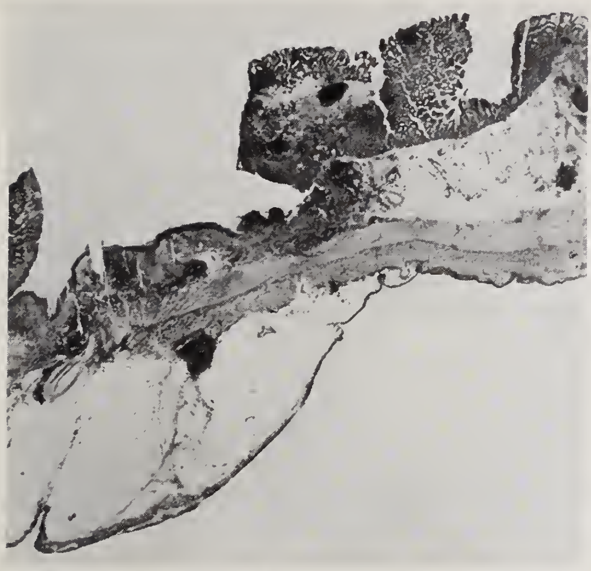

FIG. 2. Perforating ulcer of ileum; intimate attachment of omentum at point of threatened perforation (reduced from a magnification of 18 times).

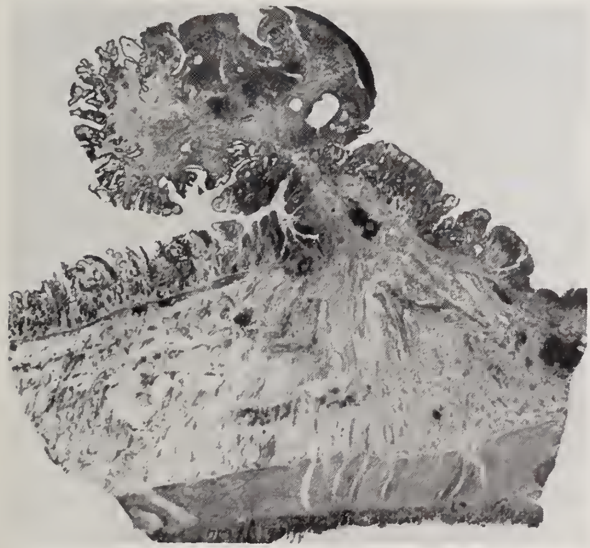

FIG. 3. Pseudo-adenomatous polyp of terminal ileum (reduced from a magnification of 28 times).

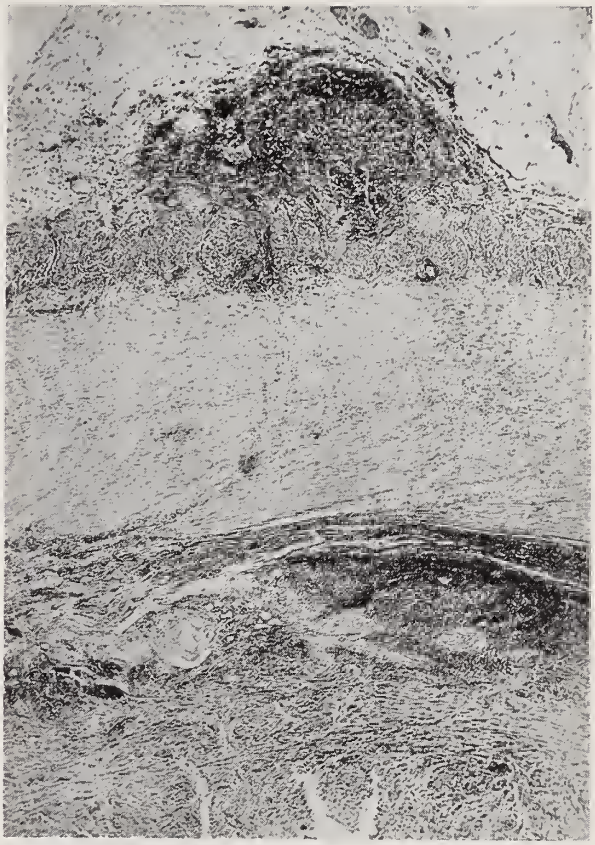

FIG. 4. Subserous collection of lymphocytes (reduced from a magnification of 30 times).

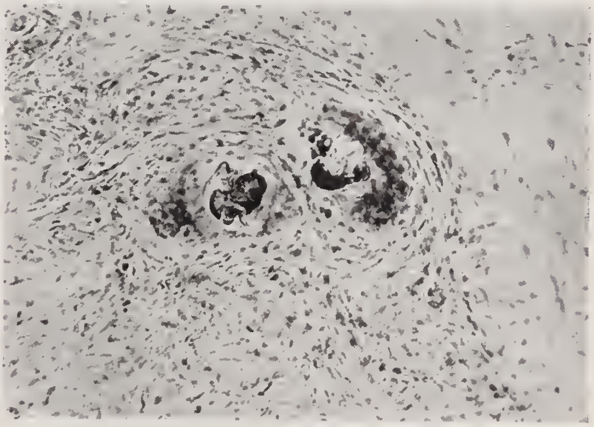

FIG. 5. Foreign body giant cells containing particles of crystalline material (reduced from a magnification of 200 times).

ulcerated bowel is due to the intimate fixation of the omentum to the site of threatened perforation (fig. 2). The mucosa of the involved bowel may often assume a cobblestone appearance, due to the presence of pseudopolypoid projections of mucosal remnants (fig. 3). The surgeon not infrequently encounters tubercle-like spots on the serosa of the involved bowel, and as a result an erroneous diagnosis of tuberculosis may easily be made. Histologic sections through these tiny excrescences demonstrate their true nature to be subserous aggregations of lymphocytes (fig. 4). Furthermore, the existence of tubercular structures and giant cells in the wall of the involved bowel may be interpreted as additional histologic evidence of tuberculosis. However, closer scrutiny usually reveals the presence of crystalline or lipoid particles in the giant cells (fig. 5), and probably this finding represents an attempt by these macrophages to remove particles of food remnants that have lodged in the depths of the ulcerated mucosa. A study I[15] made of the pathologic manifestations in 21 cases of regional enteritis revealed several pertinent facts. Predominant and usually initial involvement of the terminal ileum was evident in all cases. A patchy involvement of the small bowel, with intervening normal areas, was encountered in 5 cases, and in 10 instances the inflammatory process had extended to the proximal colon. Fistulas were found in 8 cases, in 6 of which they occurred following appendectomy in the early phase of the disease. In all but 5 cases the histologic changes were those of a nonspecific subacute or chronic granuloma. In 3 cases the pathology was typically tuberculous; in each, roentgenologic evidence of pulmonary tuberculosis was demonstrated and the tubercle bacillus was recovered from the sputum. In a single instance the microscopic findings were highly suggestive of a lymphogranuloma of the Hodgkin's type, a similar occurrence having been reported by Muir.[16]

Clinical Features

Regional enteritis is essentially a disease of youth, the average age at the onset of symptoms being 27 years. However, cases have been reported at ages ranging from 2 to 60 years. There is a slight predominance of males over females. The belief that there is a predilection for the Jewish race is apparently unfounded. Brown and Scheifley[17] recently reported the occurrence of this disease in 3 siblings, while Crohn[18] observed the disease in siblings three times.

The typical case of regional enteritis progresses through quite definite phases, and its clinical recognition depends largely on an appreciation of the sequence of the pathologic changes. In the initial phase the symptoms are those of peritoneal irritation, and inasmuch as the terminal ileum is usually the original site of involvement, pain in the right lower quadrant is the chief complaint. This, together with low-grade fever, nausea and vomiting, leukocytosis and tenderness in the right lower quadrant, makes the differential diagnosis from acute appendicitis practically impossible; and in this series appendectomy had previously been performed in more than half of the cases. Soon after the onset mucosal ulcers of the involved segment develop; then the symptoms are often indistinguishable from those of chronic ulcerative colitis and consist of watery diarrhea, fever, less pronounced abdominal discomfort and weight loss. An abdominal mass may make its appearance at this time. The diarrhea is less severe than in chronic ulcerative colitis, and the feces seldom contain fresh blood.

During these two earlier stages of regional enteritis remissions are common, and undoubtedly spontaneous and complete regression of the disease may occur. Furthermore, clinical manifestations of these phases may occasionally be absent and the patient first present symptoms of obstruction. As a result of the progressive narrowing of the lumen of the involved segment of bowel, symptoms of partial intestinal obstruction become superimposed on those of chronic enteritis in the third or stenotic phase of the disease. Alternating episodes of diarrhea and constipation occur. Severe abdominal cramps, borborygmus, abdominal distention, and at times visible peristalsis herald the onset of obstruction. Nausea and vomiting usually ensue. During this time, a pronounced loss of weight generally follows a self-imposed restriction of food intake, and the development of a secondary anemia is not unusual. Butt and Watkins[19] have reported the occurrence of a macrocytic anemia also in such cases.

In the final phase of regional enteritis the tendency toward abscess formation and the development of a fecal fistula, or of complete intestinal obstruction, becomes manifest. Internal fistulas with perforation into the cecum or sigmoid or into the urinary bladder occur spontaneously, whereas most of the external fistulas follow inadequate surgical procedures, usually appendectomy. Crohn[18] has called attention to the rather frequent occurrence of ischioanal, perirectal and rectovaginal fistulas in this phase.

DIAGNOSIS

Only familiarity with the protean manifestations of this condition permits its clinical recognition. The symptomatology almost invariably points to an obstructive lesion of the lower intestinal tract, and usually it is necessary to eliminate by adequate proctoscopic and roentgenologic methods such lesions of the colon as chronic ulcerative colitis, cancer and diverticulitis. The importance of a painstaking physical examination need not be stressed. The detection of a right lower or mid-abdominal mass may be anticipated in a majority of cases. Not infrequently the involved segment of bowel becomes fixed in the pelvis and can be palpated only on vaginal or rectal examination, and often it is mistaken for an adnexal mass. The presence of a fecal fistula which developed after an appendectomy may be highly significant, although a search for sulphur bodies and acid-fast bacilli should not be omitted in such cases. A conclusive diagnosis, however, rests on roentgenoscopic demonstration of the lesion. This can be accomplished by the use of both the barium meal and the barium enema. Weber[20] reports that by the use of the latter alone the majority of the lesions can be demonstrated, although the barium meal is employed whenever confirmatory evidence is required. The roentgenologic diagnosis rests chiefly upon demonstration of the stenosing character of the lesion with the resulting narrowing of the lumen of the bowel, constituting the well-known "string sign" of Kantor.[21] In addition, the ulcerative character of the disease is important roentgenologically since the normally regular mucosal pattern usually is distorted. In the series of 44 cases reported by Clark and Dixon,[22] three cardinal features were of outstanding importance in the diagnosis: (1) a palpable mass in 32 cases, (2) chronic obstruction in 28 cases, and (3) in 36 of 39 cases that were examined roentgenologically, a demonstrable lesion.

TREATMENT

It may safely and unequivocally be said that regional enteritis is a surgical disease. Repeated experiences with cases in which there was a protracted delay in surgical interference have shown that the disease progresses to a debilitating and often fatal culmination. Most workers of wide experience in this field are in agreement that spontaneous remissions may occur in the earlier stages, although the frequency and permanency of such remissions have not been established. Therefore, the advisability of employing radical surgery when acute cases are operated on under the unavoidable diagnosis of acute appendicitis is debatable, although under such circumstances the majority of surgeons are disinclined to resect the edematous soggy loop of involved bowel. Some advocate the use of short-circuiting procedures, such as ileocolostomy, in these early cases. Removal of the appendix, unless it is definitely diseased, only invites the formation of a fecal fistula.

However, after stenosis of the bowel or any of the subsequent complications have developed, adequate surgery offers the only hope for cure. To delay surgery only increases the hazard of the inevitable operation because the patient becomes progressively more debilitated. The choice of the proper surgical procedure is of the utmost importance. Short-circuiting operations, such as ileo-transverse colostomy, may be effectively employed in the early stages in anticipation of regression of the lesion, and may be followed by resection of the diseased bowel in those cases that later develop complications. However, exclusion operations have proved unsatisfactory in the treatment of cases with obstruction or fistula. The prime objection to such exclusion procedures is that the diseased bowel is left in situ, and this may result in the continuation of toxic manifestations and many reflex disturbances. Furthermore, failure to extirpate the diseased mesentery and lymphatic structures may lead to extension of the enteritis to the new anastomotic stoma. Resection of the involved segment of bowel to a point well above the proximal limit of the lesion is accepted as being the procedure of choice. In the absence of severe debility of the patient the completion of this in a single stage is attended by a relatively low mortality. The chronic inflammation of the bowel with consequent peritoneal immunity undoubtedly contributes largely to the low incidence of peritonitis after such a radical procedure. The economic desirability of a single stage operation is self-evident. However, the employment of a two-stage operation, with a preliminary ileocolostomy followed in several weeks or months by resection of the diseased bowel, is preferable in certain instances. Elderly individuals and those who are markedly debilitated are more safely handled in two stages. The presence of an abscess constitutes an indication for a preliminary ileocolostomy, since diversion of the fecal stream permits subsidence of the inflammation and makes subsequent resection less difficult. The question of recurrence after resection is an important one. Crohn[18] reported recurrence in 7.7 per cent of his cases, while Cutler[23] observed recurrences in 9 of 11 cases. Failure to extend the resection well above the diseased segment of bowel probably is responsible for some of these surgical failures. Although the limits of the diseased segment of intestine are usually sharply demarcated, it is wise to extend the resection above the highest level of mesenteric lymphadenopathy. It occurred to me that some of the recurrences possibly were due to resection of a segment of subacutely inflamed bowel, that is, before the disease had figuratively "burned itself out." However, a review of the cases in this series failed to reveal any association between the incidence of recurrence and such subacute pathology.

CONCLUSION

Regional enteritis is a well-defined clinical entity of nonspecific character, in which the ileum is always predominantly and usually solely involved, and in which there is pronounced tendency to stenosis of the affected bowel and the formation of fistulas. The clinical course of the disease can usually be traced through distinct phases, and this fact allows its clinical recognition although the diagnosis usually is made by roentgenologic means. Except in the earlier phases the treatment is surgical removal of the diseased segment of bowel.

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(*Continued on page 152*)

SULFANILAMIDE THERAPY WITH SPECIAL REFERENCE TO EAR INFECTIONS*

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The introduction of sulfanilamide into the therapy of infections within the past few years has been responsible for many changes in our ideas regarding treatment. As has usually been the case when a new substance has been proposed for the treatment of some specific disease, it is heralded soon as a panacea which will cure immediately, not only the disease for which it was originally proposed but nearly every ill with which the human body may become afflicted. This tremendous enthusiasm can be readily compared to the processes of nature itself, which, when repair of injured areas occurs, nearly always responds with an excess supply of repair substances.

The drug under consideration has been no exception to this general rule. Originally proposed and used in infections due to the hemolytic streptococcus, the contagion has spread until, we believe, there is scarcely any disease or condition, no matter how well or how poorly understood, in which it has not been thoroughly tried or at least casually administered. Beginning at the hub of those few investigators who have reported much well controlled and reliable evidence of its effectiveness when used in certain conditions and in proper dosage, its trail has spread through the rank and file of the profession, and even occasionally, when obtainable, spilling over to self-medication by the laity until hardly a medical conference or discussion is complete without the oft-heard question, "Have you tried sulfanilamide?"

Sulfanilamide is a potent drug with, even after the passage of so comparatively short an interval since its introduction, a tremendous bibliography. It has apparently produced miraculous recoveries, but it has also produced disastrous sequelae. It is a drug which can be readily lifesaving but at almost the same time potentially extremely dangerous. We cannot recall at the present moment a substance in such general usage which needs more careful supervision in its proper employment, not only as regards its immediate unfavorable effects, but, possibly more important, its future effects on certain important body functions. It took many years to expose the harmful properties of certain coal-tar products, notably amidopyrine, which was used to a considerably less degree.

American medicine is replete with instances of a preparation bearing many names, and it seems that each new therapeutic agent appearing on the market has as many different designations as there are manufacturing concerns. Sulfanilamide has been no exception to this rule, and there would be considerably less confusion if the proposal of the Council on Pharmacy and Chemistry of the American Medical Association were accepted regarding the use of the designation sulfanilamide for para-amino-benzene-sulfonamide.

Although the clinical use of sulfanilamide in medicine in general would naturally include its use in otitic infections, there are several points of special importance in the management of the latter which we believe deserve special consideration. In the treatment of any condition with sulfanilamide there are certain almost axiomatic requirements which should be fulfilled. We shall mention the more important ones of these and point out from time to time the variations to be considered.

Adequate doses of the drug must at all times be administered if a logical conclusion of its value is to be reached. It would be totally unfair to assume that the use of the drug has proven a failure if a smaller quantity than experience has shown to be necessary has been used. Of equal importance with the size of the dose is the frequency of administration. The reason, of course, is to give a sufficient amount at sufficiently frequent intervals to maintain a blood level of 10 to 15 mg. per 100 c.c. of blood. It has often been demonstrated that those patients whose sulfanilamide blood level is allowed to fluctuate within too broad a range do not do so well as those whose blood level remains fairly constant. The schedule of administration then should be a constant one extending regularly throughout the 24 hours of the day. There is a rather simple laboratory test in general usage for rapidly determining the amount of sulfanilamide in the blood. If this were used more frequently there would be less hesitancy in giving ample doses of the drug as well as serving as a check against giving more than is necessary or desirable.

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* Read before the Society, January 17, 1940.

In order to increase the blood concentration rapidly in acutely ill patients it is recommended that the initial dose of sulfanilamide be approximately 4 times the intended maintenance dose, if the drug is being given by mouth. This means of saturation under ordinary conditions is all that is required, but when the patient has uncontrolled vomiting or for other reasons is unable to take it in sufficient quantity by mouth it may be given subcutaneously, one half the total estimated daily dose given as the first injection. The subcutaneous infusions can be repeated 2 or 3 times each 24 hours in a 1 per cent solution or until such time as the patient is again able to take adequate doses by mouth. Long[1] recommends the use of ⅙ molar sodium r lactate in normal physiologic salt solution as the solvent of choice, and if this is not available, Hartmann's solution has proved to be a satisfactory substitute. If only normal salt solution is used it is necessary to give the patient bicarbonate of soda. Before leaving the question of dosage it is well to remember that children tolerate relatively larger doses of sulfanilamide than do adults, and infections in bony structures require treatment with the drug over a longer period of time than do infections of the soft tissue. Accumulation of clinical experience indicates that, barring the appearance of toxic manifestations, the full dosage of the drug should be continued for at least 2 days after the temperature has returned to normal, and then gradually diminished for several days longer before discontinuing it. Relapses are most frequent in those instances in which the sulfanilamide is stopped too early or too abruptly.

A host of toxic manifestations are reported in the literature. Many have occurred frequently, some have been observed occasionally, and a few may be considered very rare. The more common and potentially serious ones are acidosis, cyanosis, fever and changes in the number of red and white blood cells.

A mild degree of acidosis frequently occurs upon administration of sulfanilamide, the carbon dioxide combining power rarely falling below 30 volumes per cent, and usually only to between 35 and 40. Much experimental work has been done by many independent workers in an effort to determine the cause, and the conclusion which seems to prevail is that the drug itself produces a primary alkali deficiency, thereby producing an acidosis. This naturally explains why the concomitant administration of bicarbonate of soda or one of the lactate buffer solutions will prevent or relieve the acidosis.

A digest of the literature relating to the origin of the cyanosis which is so frequently seen in patients seems to indicate that the most likely cause of this manifestation is a staining of the red blood corpuscles with some by-product of the sulfanilamide in the blood. Both methemoglobin and sulphemoglobin have been detected in the blood, the former in a greater percentage of instances than the latter. We have never felt that cyanosis constituted a sufficient indication for discontinuing the drug. It is a complication of practically no significance and disturbs the family much more than it should the physician.

Fever due directly to the administration of sulfanilamide may occur at any time after beginning treatment, but the usual time is between the seventh and the tenth days. A sulfanilamide febrile reaction may be suspected when a patient who is responding well to the treatment and shows clinical improvement and a rapid decline of the fever, or even one that has returned to normal under continuous therapy, suddenly develops what appears to be an unexplained return of fever without a loss of the clinical improvement to be expected if a relapse had occurred. The fever itself may be the toxic manifestation and will subside in from 24 to 48 hours after the withdrawal of the drug, or it may be the indication of the beginning of one of the other many toxic conditions which may occur.

Changes in number of the red and white blood cells may be of sufficient severity to demand the immediate withdrawal of the drug. Some instances of malignant neutropenia have been reported following the use of sulfanilamide. They are more likely to occur after the drug has been continued over a long period of time. It is often heard that patients treated with this drug may readily develop leukopenia, but the fact has been established that the placing of this condition in the category of a toxic manifestation has probably not been completely justified. It is true that the white cell count does drop rapidly in patients with acute infections who are being treated with sulfanilamide, but this is due to the cure of the disease rather than to the toxic action of the medicine. We recall a patient with chronic agranulocytosis who had a white cell count averaging about 3,500 cells per cu. mm., approximately 92 per cent of which were small lymphocytes. He had severe sinus infection, a slough in his hard palate and a continuous high fever. He improved clinically under large doses of sulfanilamide (6 Gm. daily) although there was no demonstrable improvement in his blood count.

Many patients taking sulfanilamide develop a mild form of hemolytic anemia which disappears rapidly upon cessation of therapy. Acute hemolytic anemia has also been reported and a number of cases have proved fatal. They usually begin shortly after treatment has been started and are among the most serious sequelae of sulfanilamide.

The established fact that these conditions may occur makes it imperative that those patients receiving sulfanilamide be under continuous observation and that their blood be checked at frequent intervals. The practice of giving the drug and forgetting about the patient will prove disastrous in a certain number of instances.

We believe that the treatment of acute otitic infections presents, as has been previously indicated, a problem somewhat different in certain respects from those of general medical conditions. A majority of the cases of acute otitis media and the frequently accompanying mastoiditis are due to the hemolytic streptococcus. On this account one might reasonably suppose that the conditions should readily respond to sulfanilamide therapy, and, as a matter of fact, such is the case. It has been demonstrated beyond question during the past two years that not only has the duration of disability from middle-ear disease been considerably shortened but the only too often occurring complication of mastoiditis has been reduced to a point which in previous years might well have been considered impossible of accomplishment. Meningitis, the bête-noir of every otolaryngologist, has been diminished almost to the vanishing point. To emphasize this, an inspection of the records of the Episcopal Eye, Ear and Throat Hospital discloses the remarkable fact that not a single case of meningitis complicating otitis media or mastoiditis occurred during the year 1939.

Every patient suffering with acute otitis media should be treated as a severely ill person. If there is reason to believe that the hemolytic streptococcus is the implicated organism the maximum initial dose of sulfanilamide should be given and the maximum maintenance dose at 4-hour intervals be continued throughout each 24 hours, or sufficient to maintain a blood level of 10 to 15 mg. per 100 c.c. and until indications appear that the dose can be lessened. If the drum begins to bulge or there are other indications of pressure in the middle ear, it should be incised. Drainage in patients taking sulfanilamide does not continue as long or as profusely in the presence of hemolytic streptococcal infections, and the error can readily be made of diminishing the therapy too quickly or even of stopping it completely because of the prompt improvement of all clinical signs. Unfortunately when this is done a relapse is very likely to occur. The experienced otologist can frequently tell with unerring accuracy by careful observation of the appearance of the drum the progress of the infection, but he cannot predict by this means alone when the sulfanilamide can be decreased or stopped. In order to prevent possible relapses or the occurrence of mastoiditis the drug should be continued for a week after all signs of drainage have disappeared. We emphasize again the important fact that the proper management of otitis media with the addition of sulfanilamide will prevent many cases of mastoiditis. It is interesting to note that acute ear infections with associated mastoiditis frequently abate so rapidly when treated with sulfanilamide therapy that the physician, as well as the patient, may be lulled into a false sense of security in the belief that the condition is cured. There may still be a smouldering infection remaining, however, and careful observation will reveal some definite symptoms, such as an occasional small rise in temperature, a continued leukocytosis, some deafness, etc. These are definite indications that the patient is not entirely well, and a continuation of the sulfanilamide therapy is imperative to insure complete recovery. If the progress of the mastoiditis cannot be controlled satisfactorily with sulfanilamide, surgical intervention naturally becomes necessary. The drug should be administered in maximum doses during the acute course of the disease, and it should be remembered that when bony structures are involved it takes the larger blood concentration of sulfanilamide to keep it under proper control. Therefore, it should be continued until the wound is well filled with healthy granulation tissue before the dose is tapered off.

If there is reason to believe that some organism other than the hemolytic streptococcus is the infecting agent it may be advisable to defer the administration of sulfanilamide. We are on the threshold of the introduction into the therapy of infection two substances which, from the limited amount of experimental work available at the present time, are probably efficacious in a greater variety of bacterial infections. These two substances, the first known as sodium sulfathiazol, No. D 373 Na, and the second as sulfamethylthiazol, no. MT 3920 (the latter much less toxic than the former), give great promise of being as effective for certain coccal infections as is sulfanilamide for the hemolytic streptococcal. These facts point to the inevitable conclusion that a bacteriologic study of these infections is of the utmost importance. It is essential to know with certainty which one of these chemotherapeutic agents should be used, and without a knowledge of the exact bacteriology involved the choice cannot properly be made.

Large quantities of fluids have heretofore been insisted upon in acute infectious processes, but it is well to remember that if the intake is too great during the administration of sulfanilamide it will be exceedingly difficult to get the proper concentration of the drug in the blood. On this account it has been recommended that the probable optimum quantity to be allowed should be 3,500 c.c. daily for the average adult patient. This amount under ordinary circumstances will be ample for the patient's needs and at the same time not too much to prevent the proper concentration of the drug in the blood. Persistent vomiting or failure of absorption may make it necessary to give the sulfanilamide parenterally according to the methods outlined above.

Meningitis is treated in much the same manner as any acute infection in so far as sulfanilamide therapy is concerned. It no longer appears necessary or advisable to inject solutions of the drug directly into the spinal canal, as was formerly done. Maximum doses by mouth will, in most instances, rapidly produce a concentration in the spinal fluid of 10 to 12 mg.

per 100 c.c., and if continued sufficiently long will in many instances produce recovery.

The need for transfusion in otitic infections has diminished considerably. It is the exception at the present time to see profusely draining ears extending over periods of from 4 to 6 weeks or longer and then requiring an operation for mastoiditis. Many of these patients develop severe secondary anemia which responds only to transfusions of blood. Many patients of this type now are treated promptly and adequately with sulfanilamide and are well before they have had an opportunity to develop anemia. However, transfusions are still indicated when the patient is debilitated from a previous exhausting illness or other cause, as well as for those unfortunate patients who develop certain toxic manifestations of the drug, particularly acute hemolytic anemia.

According to Long and Bliss,[1] "As far as we know, the only contraindication to treatment with sulfanilamide is the history that the patient had taken the drug on a previous occasion and had suffered a severe toxic reaction. In such an instance we would hesitate, and would only administer the drug with the greatest care, following the patient's course conscientiously."

In concluding this brief summary of the present status of the use of sulfanilamide we would stress the fact that we have at hand a chemotherapeutic agent of inestimable value for the treatment of certain specific infections. There are posted certain criteria for its proper use and definite indications for its withdrawal. Those who deviate will deny its established value or run afoul of its toxic potentialities. Those who follow the teachings of the accumulated experience of its great usefulness will diminish the morbidity as well as the mortality among their patients.

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Method of minimizing risk of postoperative pulmonary embolism. Elevating the foot of the patient's bed for from twenty-four to forty-eight hours after a major operation and then having the patient exercise on ordinary bicycle pedals mounted on the foot of the bed will help stimulate the retarded blood circulation which follows major operations and thus help avoid the formation of blood vessel obstructions which might prove fatal, Geza de Takats, M.D., and Joseph H. Jesser, M.D., Chicago, report in *The Journal of the American Medical Association* for April 13, 1940.

They recommend that the patient, except in certain types of operations, pedal for five minutes three times a day, starting about the third day after operation. This exercise and the elevating of the bed immediately after the operation helps promote the flow of blood back to the heart. Retarded blood flow and the resulting stagnation are predisposing factors in the forming by coagulation of a plug or clot in a blood vessel or in one of the cavities of the heart, the clot remaining at the point of its formation. The condition is known as thrombosis. The blocking of a blood vessel by a clot or obstruction which has been brought to its place by the blood current, frequently from a thrombus, is known as embolism. Either condition may prove fatal. The importance of precision in surgical operation and of preventing infections also is stressed by the two authors in their discussion of diagnosis, prevention and management of pulmonary embolism, a highly fatal type which involves obstruction in the lungs.

While it is a common belief that death occurs so rapidly after the onset of symptoms of pulmonary embolism that there is no time to institute treatment, the authors cite a series of cases in which 60 per cent of the patients lived more than an hour after the first symptoms, 34 per cent living from one to several days.

When labored breathing and blueness of the skin are the predominating symptoms they advocate the administration of 100 per cent oxygen. In massive pulmonary embolism, characterized by pallor, fall in blood pressure and chest pain, they advocate the use of papaverine and atropine. They report a survival rate of 82 per cent among a series of patients with pulmonary embolism treated with one or both of the drugs as compared with a rate of only 13 per cent in a group not so treated. The two men say they also have used the two drugs in milder cases of embolism as a prophylactic measure.

THE DIAGNOSIS AND TREATMENT OF LARYNGEAL TUBERCULOSIS*

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Tuberculosis of the larynx occurs in about 25 per cent of all patients affected with pulmonary tuberculosis. It is the most serious complication because there can be no improvement in the patient's general condition if sleep and rest are prevented by continual paroxysms of coughing and attacks of pain. Proper food, the most helpful agent in treating this disease, cannot be taken if each act of deglutition is accompanied by pain.

The local lesion itself frequently becomes secondarily infected, and toxins are absorbed which add an extra handicap to a lowered vitality.

As tuberculosis is one of the most common diseases and the laryngeal complications occur in from 15 to 30 per cent of all cases, it seems that this subject should be of general interest.

Incidence

In a study of 500 patients with laryngeal tuberculosis at the Maryland State Sanatorium in 1928, we found the onset of this complication to be most frequent between 20 and 40 years of age, but it may occur in the extremes of life (table 1). Our earliest case was at 10 years of age. We had one man who developed laryngeal tuberculosis at 75 years of age and one woman at 74.

TABLE 1

Age Distribution

AGE	MALES	FEMALES	TOTAL
10 to 20	12	29	41
20 to 30	84	102	186
30 to 40	82	55	137
40 to 50	67	26	93
50 to 60	26	6	32
60 to 70	6	3	9
70 to 80	1	1	2

The relation of occupation to this complication is shown in table 2.

TABLE 2

Relation of Occupation to Laryngeal Tuberculosis

GROUP	OCCUPATION	NUMBER OF CASES
1	Physicians, dentists, nurses	14
2	Students, teachers	24
3	Salesmen, saleswomen	26
4	Dusty occupations (printers, painters, steel, iron and stone workers, barbers)	78
5	Open-air occupations (laborers, motormen, streetcar conductors, farmers, teamsters)	99
6	Clerks, stenographers	76
7	Housewives, domestics	135
8	Sedentary occupations (tailors, shoemakers, seamstresses)	21
9	Voice users (singers)	
10	No occupation	27

It is interesting to note that while we had quite a number of singers, ministers and actors in our group who were affected with pulmonary tuberculosis, not one of them showed laryngeal lesions. In other words, the use of the voice seemed to play no part in the development of this complication.

Group 7 of table 2 (housewives and domestics) included more cases than any other group. This could be easily explained, as the greatest majority of our female patients were of this class.

Laborers, motormen, streetcar conductors, teamsters and farmers, people who were engaged in outdoor occupations, showed a greater number of complications than the group of painters, printers, paperhangers, barbers, steel, iron and stone workers, or those who were engaged in some dusty or irritating occupation. This would afford added evidence that laryngeal tuberculosis is not a primary lesion but is secondary to the pulmonary condition resulting from lowered tissue resistance.

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PATHOLOGY

It is now generally admitted that laryngeal tuberculosis is not a primary lesion but is secondary to the pulmonary infection. The anatomic construction of the posterior laryngeal wall makes it susceptible to invasion by tubercle bacilli. The loose folds of mucous membrane which are in almost constant motion become covered with tubercle-laden sputum. The epithelium is easily irritated and eroded, so that organisms can enter the underlying tissue and tubercles develop. The nature and extent of involvement depend on the patient's resistance and course of treatment.

Table 3 shows the location of the lesions as we found them in our 500 cases.

TABLE 3

Location of Lesions in the Larynx

GROUP		NUMBER OF CASES
1	Epiglottis, arytenoids and arytenoepiglottidean fold	45
2	Arytenoids only	40
3	Vocal cords and ventricular bands	137
4	Vocal cords and arytenoids	133
5	Posterior wall (elevation, roughness) and interarytenoid sulcus	112
6	Locations not stated definitely	31
7	Tuberculous ulceration of palate (without any laryngeal lesion)	1
8	Tuberculous ulceration of tonsils (without any laryngeal lesion)	1
9	Tuberculous ulceration of tongue, nose or tonsils with a definite laryngeal lesion	7

As shown in table 3, lesions of the vocal cords and ventricular bands were most frequent, there being 137 cases. Involvement of the vocal cords and arytenoids came second, with 133 cases in this group.

Elevation and roughness of the posterior wall and interarytenoid sulcus came next, with 112 cases. Lesions on the epiglottis, arytenoids and arytenoepiglottidean fold and arytenoids only were about evenly distributed.

Group 6 included 31 cases in which locations were not stated definitely. Some patients of this group had extensive involvement of the whole larynx, while some could not be definitely diagnosed, since patients were admitted in a critical condition and a proper and thorough examination could not be made. Groups 7 and 8 include 1 case of tuberculous ulceration of the palate and 1 case of ulceration of the tonsils without any laryngeal lesions. Group 9 shows 7 cases in which, besides the definite laryngeal lesion included in other groups, there was ulceration of the tongue, nose or tonsils. The frequency of involvement of the various parts of the larynx is in most instances directly proportional to their exposure to irritation and functional activity.

TABLE 4

Results of Sputum Examination

CONDITION OF LUNGS	POSITIVE	NEGATIVE	NOT EXAMINED
Minimal lesion	...	...	...
Moderately advanced lesion	131	11	...
Far advanced lesion	353	2	3

The results of sputum examination are shown in table 4. In the moderately advanced group, sputum was positive for tubercle bacilli in 92.2 per cent and negative in 7.8 per cent. In the far advanced group, 99.4 per cent had positive sputum, and in only 0.6 per cent was it negative. Three patients did not have the sputum examined since they left the sanatorium the same day they were admitted.

DIAGNOSIS

The diagnosis of tuberculous laryngitis is not difficult, although it is frequently neglected until serious pathologic changes have occurred. Too much cannot be said about the importance of early diagnosis in these cases, since intrinsic lesions respond readily to treatment and most cases can be effectively cured.

It is a mistake to wait for the usual classical subjective symptoms to develop, such as huskiness of the voice, hoarseness, pain referred to the ear or throat, and dysphagia, before examining the larynx. Many cases show a well-developed lesion before subjective symptoms appear. For this reason every patient with pulmonary tuberculosis should be considered a potential case for the development of laryngeal complications. When pulmonary tuberculosis is recognized, it is the duty of the clinician to see that a careful laryngeal examination is made. Even though the throat appears normal on first examination, regular routine laryngoscopies should be made to look for suspicious lesions.

Every sanatorium for the treatment of tuberculosis should have not only a skilled laryngologist on its staff, but all physicians in the institution should be instructed to make a satisfactory laryngeal examination.

If more attention is given to this subject, unquestionably the frequency of severe complications can be lessened and many fatal cases prevented.

When examining a throat for early tuberculous involvement very careful investigation of the posterior laryngeal wall should be made, for in most cases this is the most frequent as well as the first area to be infected.

The anatomic construction of the interarytenoid region makes it particularly susceptible to the invasion of tubercle bacilli. Supported by a loose connective tissue framework, the mucous membrane is thrown into folds by active movement during phonation, respiration, coughing and deglutition. Thus, infected sputum, which is being continually coughed up, passes over this irregular surface, and much of it remains in constant contact with the deeper crypts, especially when the patient is lying down.

After a time the irritating and devitalizing action of toxins produces a reaction and erosion of this mucosa. There may be at first only a single hyperemia, or the tissue may be infiltrated, velvety or roughened. As the process advances, gradually a hyperplasia occurs, which may be elevated and smooth or nodulated with irregular vegetations as tubercles coalesce. When the epithelium breaks down a raw ulcerating surface forms which becomes infected with mixed organisms.

The next structures in order of frequency to be involved are the vocal processes, then the vocal cords.

The nature of the true cords makes them susceptible to attack. Cartilaginous bands covered with a thin layer of epithelial cells do not withstand the onslaughts of toxins for any great length of time without becoming damaged. Hyperemia, thickening or fusiform enlargement on one or both cords may be first noticed. Later when ulceration occurs there is irregularity, which may assume the typical mouse-bitten appearance, or progress until there is much destruction of tissue and deformity, which can never be repaired.

The ventricular bands are not involved as frequently as the cords, but a lesion here may be very extensive, and tuberculomata in this region are not uncommon.

As long as tuberculosis is confined to the interarytenoid space, vocal processes, cords or ventricular bands, the lesion may be considered intrinsic. The prognosis here is much better than in affections of the arytenoids, epiglottis or pharynx.

Early involvement of the arytenoids may appear as a hyperemia or pseudoedema on one or both sides. In advancing stages, when ulceration develops, there is interference with swallowing, and dysphagia is associated with the taking of food. Nodular swellings, edema of turban-shaped character and ulcerated areas are frequently seen on the epiglottis late in the disease. Involvement here is a distressing complication, since there is so much pain when food is taken.

Pharyngeal tuberculosis is fortunately comparatively rare, since it is a grave condition for which very little can be done.

It is the object of this paper to emphasize the importance of making a diagnosis by objective examination in an effort to recognize early lesions before they have advanced to the stage when subjective symptoms are produced. However, certain complaints of the patient are often helpful in a final diagnosis.

Dryness and burning of the throat should be regarded with suspicion in tuberculous patients, since this frequently occurs two or three weeks before a definite lesion can be made out.

Pain referred to the ear and in the region of the throat usually indicates some laryngeal infiltration, and such cases should be carefully watched. The location of the lesion has much to do with the symptoms produced, for a well-advanced infection in the interarytenoid space or ventricle may give little or no disturbance, while a small degree of cord infiltration will produce huskiness of the voice and later hoarseness or aphonia.

Infiltration and ulceration around the arytenoids and epiglottis interfere with swallowing, and dysphagia is usually associated. Cough is present in most cases and becomes greatly aggravated when raw surfaces are exposed to the continual irritation of mucus and sputum.

As laryngeal involvement is practically always secondary to a pulmonary condition, we usually have associated the general symptoms of tuberculosis, such as loss of weight, night sweats, coughs, digestive disturbances, characteristic temperature, etc.

Differential Diagnosis

It is at times difficult to differentiate between cases of catarrhal laryngitis and early tuberculosis. As a rule, in patients with catarrh there is some infection made out in the sinuses, teeth or tonsils, which produces a uniform redness of the mucosa of the pharynx, larynx and vocal cords, and the inflammation clears up when the infected areas are given attention, while in tuberculosis there is usually some irregularity in the laryngeal injection and infiltration.

Syphilis has not been common in our cases and when present is not difficult to differentiate from tuberculosis, as the Wassermann test and general symptoms confirm the diagnosis.

Carcinoma often presents a serious problem in diagnosis. Male patients who are over 45 years of age and are being treated for pulmonary tuberculosis frequently develop chronic lesions on the vocal cords which require considerable observation and study to determine their true nature. In many cases it is necessary to resort to biopsy for a final diagnosis.

Prophylaxis

Many cases of laryngeal tuberculosis can be prevented, and undoubtedly our most promising work can be accomplished along this line. It is the duty of laryngologists to instruct the family physician in earlier recognition of these cases. They should be advised of the importance of routine laryngeal examinations in every case of pulmonary tuberculosis. Since so much good has been accomplished by educational measures in the recognition and treatment of pulmonary tuberculosis, the same methods should be applied in reference to the complications. Every one should know that this serious disease is not as hopeless as is generally represented, but that most cases can be cured if recognized in the early stages.

All possible conservative measures should be directed to the correction of pathologic conditions in the upper respiratory tract. Infected sinuses, diseased teeth and focal infections in the tonsils should be given every possible attention.

We all know how seriously constant absorption of toxins from these structures affect a normal person, while in a tuberculous patient the effects are much greater, since the system is already overloaded with septic material and any extra handicap may be all that is necessary to overcome the chances of recovery.

Furthermore, irritating purulent secretion has a deleterious action on normal laryngeal mucosa and may be sufficient to injure the epithelium so that invasion of tubercle bacilli is inevitable. Therefore, serious consideration should be given to all factors that might have a bearing on the prevention of this complication.

Treatment

The treatment of laryngeal tuberculosis may be considered under three divisions, viz., (1) vocal rest, (2) treatment of the local lesion, and (3) general treatment.

Vocal Rest.—In all cases in which tuberculous invasion of the larynx has been discovered, absolute rest of the voice should be instituted. It does little good merely to tell a patient not to talk, but he should be instructed to write everything. This impresses him with the seriousness of his condition and is also very important as a curative measure. Unquestionably many cases have been cured by silence alone, as has been frequently pointed out. Therefore, whatever other form of treatment may be supplemented, vocal rest should be carried out religiously.

Treatment of the Local Lesion.—For active treatment of the local lesion, we have found the judicious use of the electric cautery most beneficial and now employ it in preference to all other methods of treatment. Our results have been most gratifying, and it is surprising that this form of treatment, which has been used by a limited number for such a long time, is not more generally employed by all laryngologists.

The technic of cauterization is simple, results are sure and complications are negligible. Cauterization can be easily carried out in an office or at the bedside without inconvenience to the patient. Local anesthesia is employed, and the indirect method is advisable; however, the direct method may be used when desired.

Cauterization produces an inflammatory reaction of the tissue, with the development of new blood vessels, congestion and fibroblasts in the avascular tubercle, giving it necessary nutrition and resistance.

Following this plan of treatment, we have found the use of the cautery most satisfactory, since early lesions clear up after two or three treatments, and advanced cases show marked improvement after a few cauterizations.

Even in severe and hopeless cases the cautery is of great value as a palliative measure to relieve pain and coughing.

Only in exceptional cases do we find it necessary to inject the superior laryngeal nerve, and the use of cocain to allay pain is seldom required since cauterization has been in use.

General Treatment.—Whenever possible, these patients should be treated at a sanatorium, since a carefully regulated plan of general treatment of the pulmonary lesion is most necessary. It is unwise to have patients with active tuberculosis travel long distances to physicians' offices and wait in hot crowded rooms for treatment. Under such conditions coughing is increased and the strain of travel lowers the patient's general resistance. All of these unfavorable features are eliminated in sanatorium treatment, and the cases can be carefully followed by both the clinician and the laryngologist, between whom there should be the closest coöperation.

At our State Sanatorium, under the direction of Dr. Victor Cullen, all cases on entrance are given a thorough physical examination, have a complete history taken, are followed by means of a pulse and temperature record, and have an X-ray film of chest made. If the temperature is over 99.4°F., the patient is put to bed and kept on vocal rest for a while. As soon as the resistance is built up somewhat and the temperature begins to come down cauterizations are started and are continued at monthly intervals until cured.

TABLE 5

Results of Treatment in 500 Cases

CONDITION OF LUNGS	NUMBER OF CASES	THROAT CAUTERIZED			THROAT NOT CAUTERIZED		
		Improved and Healed	Unimproved	Died	Improved and Healed	Unimproved	Died
Minimal lesion	...	...	...	...	...	...	...
Moderately advanced lesion	142	93	...	2	15	26	6
Far advanced lesion	358	95	22	19	14	112	96

Table 5 covers the period from August 1923 to February 1, 1928, and includes 500 patients with laryngeal tuberculosis treated in the sanatorium.

Table 5 shows that (1) not a single case of laryngeal tuberculosis occurred with incipient lung involvement, (2) of the 142 patients with moderate lung involvement the throat was cauterized in 95, or 67 per cent, and was not cauterized in 47, or 33 per cent, and (3) of the 358 patients with far advanced lung involvement, the throats were cauterized in 136, or 38 per cent, and were not cauterized in 222, or 62 per cent.

Of the patients in (2) whose throats were cauterized, 93 or 65.5 per cent were improved and healed, and 2 or 1.4 per cent died; both had had their laryngeal lesion healed. The cause of death was chronic nephritis in 1 case and chronic myocardial degeneration with acute dilatation of the heart in the second case. There were no "unimproved" patients in this group.

Of the patients in (2) whose throats were not cauterized, 15 or 10.6 per cent were improved and healed under ordinary sanatorium care including vocal rest or absolute silence; 26 or 18 per cent were unimproved; and these include the ones who refused to have their throats cauterized or whose condition would not justify cautery treatment (elevation of temperature, asthenia, high blood pressure). Six or 4.2 per cent died.

Of the patients in (3) whose throats were cauterized, 93 or 26.5 per cent were improved and healed; 22 or 6.1 per cent were not improved, and 19 or 5.3 per cent died. In this last group the cauterization was done for more of a psychic reason or to relieve temporarily the severe pain connected with swallowing, particularly in patients with epiglottidean involvement. The outlook of this group was absolutely hopeless on admission.

Of the patients in (3) whose throats were not cauterized, 14 or 4 per cent were improved and healed under ordinary sanatorium care, including vocal rest or absolute silence; 112 or 31.3 per cent were unimproved and 96 or 26.8 per cent died.

The rather large percentage of unimproved and dead patients in this group (whose throats were not cauterized) could be easily explained in view of the facts that the majority of patients with far-advanced pulmonary tuberculosis are toxic, the disease runs an active course, and there is a hectic temperature. These factors contraindicate cautery treatment.

Of the 96 who died without having the throat cauterized, 31 or 32.3 per cent were in the sanatorium less than 1 month; 38 or 40 per cent were in the sanatorium less than 3 months, and the rest were there for more than 3 months. The comparative results of those whose throats were cauterized with those whose throats were not cauterized is rather striking. Very decided effects were noted in far-advanced cases, in which the prognosis was always grave; the cautery exercised a favorable influence on the lungs and on the general condition in many patients.

The laryngeal lesion is essentially a cellular infiltration. This infiltration is avascular, with a tendency to rapid destruction of the central cells. The beneficial action of the cautery is due more to the revitalization of the tissues by induced hyperemia than to destructive action of the heat. The development of granulation tissue and formation of new blood vessels following the sloughing of the cauterization area accounts for the good results. The great advantage of using the electrocautery is that its action is limited to the diseased area.

Since the electrocautery will in almost every instance accomplish good results, it should be considered the best method for the treatment of laryngeal tuberculosis. The treatment should be undertaken only in patients in whom there is no fever or just slight elevation of temperature except in patients with urgent symptoms that demand intervention.

Every case should be carefully studied, since indiscriminate cauterization will not accomplish results. It is most important that there be the closest coöperation between the internist and the laryngologist when treating these cases. A patient who is admitted with fulminating general symptoms and high temperature should be kept in bed and the general resistance built up before cauterizations are started, since if there is not sufficient resistance to overcome some of the general effects one cannot expect the laryngeal lesion to be cured by any form of treatment.

However, in any reasonably early case we feel that the chances of cure are good. The prognosis of laryngeal tuberculosis should be more promising and the percentage of the complicated cases less as the importance of this subject becomes more generally appreciated. We should be able to get these patients in time for effective treatment, because this will also help to reduce the general mortality of tuberculosis.

SUMMARY

1. In every patient affected with pulmonary tuberculosis a thorough examination should be made of the larynx.

2. Some laryngeal lesions are well advanced before subjective symptoms develop; therefore, early changes can be seen if a routine examination of the larynx is made.

3. Pain referred to the ear or larynx, dryness and tickling sensations in the throat, and hoarseness are early symptoms.

4. Tuberculosis of the larynx is secondary to a pulmonary lesion and is often an index of the patient's general resistance.

5. Sputum is the most common cause of laryngeal infection, but organisms may enter by way of the lymph and the blood stream.

6. Laryngeal tuberculosis occurs in every age of life, but the majority of cases are found between 20 and 40 years of age, with males predominating.

7. This complication has no relation to occupation.

8. Many cases can be prevented to a certain extent by the correction of pathologic conditions in the upper respiratory tract, such as deviated septum, sinusitis, adenoids, hypertrophied turbinates and hypertrophied tonsils.

9. Nontuberculous laryngitis, colds, tonsillitis and excessive coughs in tuberculous patients should receive prompt attention, because conditions leading to superficial loss of epithelium open the way for infection by the sputum.

10. The frequency of involvement of various parts of the larynx is directly proportional to exposure, irritation and functional activity.

11. Laryngeal tuberculosis has never been a promising field for medicinal therapy regardless of the method of treatment. Many different drugs have been used and many local applications have been tried, most of which have been abandoned, especially caustics and irritants.

12. Of all our patients with laryngeal lesions with moderate lung involvement treated by electrocautery, 65.5 per cent were improved and healed, and 26.5 per cent with far-advanced lung involvement were improved and healed.

13. In the Maryland Sanatorium we did not have any "unimproved" patients treated with cautery in the moderately advanced group.

14. Cautery treatment in many patients exercised a favorable influence of the lungs and on the general condition. No bad results were encountered.

15. Cauterization in all patients has been done under local anesthesia by the indirect method at monthly intervals.

16. Results obtained by electric cautery treatment indicate without doubt that tuberculosis of the larynx is curable if treatment is started reasonably early.

17. In all suggestive cases we advise vocal rest or absolute silence. While active laryngeal tuberculosis does not have any tendency toward spontaneous healing, it is surprising with what rapidity some incipient cases with slight infiltration will clear up as the result of absolute silence. Therefore, regardless of whatever method of treatment is added, silence is imperative in all cases.

18. Elevation of temperature (high degrees), marked asthenia and high blood pressure are contraindications in using the cautery, although in patients in whom serious symptoms (severe pain, difficulties of swallowing) demanded alleviation, the cautery was used to bring temporary relief.

19. When the electrocautery is used, one thing should be particularly and strongly emphasized, and that is the condition of the lungs. No laryngologist should undertake electrocautery treatment without coöperating with or being guarded by a clinician. Indiscriminate use of the cautery in unsuitable cases will do more harm than good and the method of treatment itself will be brought into disrepute.

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THE MANAGEMENT OF ACUTE CHOLECYSTITIS*

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Cholecystitis represents one of the most common diseases encountered in the abdominal cavity. The disease manifests itself in two distinct forms, the acute and the chronic. The management of chronic cholecystitis will not be considered here, since the discussion of that phase of the subject may well be left to the internist rather than to the surgeon. Nevertheless, it may be remarked incidentally that the existence of a chronic lesion of the gall bladder renders the patient liable to a subsequent acute infection of the latter which may present itself at any time.

It is now the general consensus of opinion of competent pathologists that the primary etiologic factor in acute cholecystitis is obstruction of the cystic duct, most frequently by stone, but occasionally also by edema resulting from chemical irritation (regurgitation of pancreatic juice, for example), or from lymphatic involvement secondary to infection originating in the liver, the blood or the bowel. Impaction of a stone in the cystic duct produces tumefaction around the stone, with consequent exertion of pressure upon the lymphatics, the veins, and the artery leading to the gall bladder; this condition induces edema which in its turn interferes further with the blood supply and leads to the development of necrosis, gangrene, or even perforation of the wall of the gall bladder. The degree of severity of these inflammatory complications depends upon the extent to which the blood supply of the gall bladder is impaired by the tumefaction around the cystic duct.

For many years the conservative treatment of acute cholecystitis was advocated especially by older surgeons, who recommended that palliative measures be employed at first and that operative therapy be deferred until the acute manifestations of the disease had subsided. The position of these surgeons was based chiefly upon the relative difficulty and danger of an operation for cholecystitis in its acute stage as compared with surgical intervention during the quiescent period, since in acute cholecystitis the gall bladder is often tense and distended, the tissues are more friable, bleeding is more profuse, and there is greater tumefaction around the cystic duct. However, it is quite evident that the present more radical trend is toward immediate operation in acute cholecystitis. Two principal reasons may be assigned for this gradual reversal of sentiment. First, if it be conceded that obstruction is of primary significance in acute cholecystitis and is invariably antecedent to infection, then the removal of the obstructed viscus prior to the occurrence of infection is clearly indicated. Second, and perhaps even more important, is the absence of direct parallelism between the clinical symptoms of acute cholecystitis and the pathologic course of the inflammatory process in the gall bladder. Experience has demonstrated that the clinical symptoms exhibited by the patient rarely reveal whether the course of the pathologic process in the gall bladder tends toward restitituion or gangrene and perforation. Accordingly, by analogy with acute appendicitis, in which the impossibility of accurate determination from the symptoms alone of the course of the pathologic process in the appendix renders early operation advisable, it would appear that the same consideration should apply to acute cholecystitis, whose clinical and pathologic phenomena are equally difficult to interpret.

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* Read before the Society, January 24, 1940.

In my judgment a moderate attitude should be assumed with respect to the adoption of a conservative or a radical policy and plan of procedure. When we are consulted concerning an attack of acute cholecystitis, in most instances we may well advise that the patient be placed on probation, or observation, for from twenty four to forty-eight hours. If during this interim the initial attack subsides under symptomatic treatment, a continuation of conservative therapy is warranted until the quiescent stage is attained, whereupon the gall bladder may be removed. However, if after a period of supervision of from twenty-four to forty-eight hours the initial attack has not abated or revealed definite evidences of recession, it may be confidently concluded that the attack in question is exceptionally severe and that the hazard of ensuing complications is correspondingly imminent, and an immediate operation should be performed. Moreover, if subsidence and recession are succeeded on the third or fourth day by a return of the chills, fever and abdominal pain in the right upper quadrant which characterized the initial attack, a recurrence is indicated, and immediate surgical intervention should be instituted.

During the acute stage of cholecystitis the surgeon may elect to employ either of two operative procedures, namely, cholecystectomy and cholecystostomy. Cholecystectomy is whenever practicable by all odds the preferred operative method in acute cholecystitis, inasmuch as the pathologic process is thus arrested and the risk of gangrene with or without perforation is thereby averted. As an example of the value of cholecystectomy in the acute stage of cholecystitis the results obtained and reported by Steinke[1] may be adduced. Out of a total of 200 patients who underwent cholecystectomy for acute cholecystitis, 15 (or only 9.4 per cent) died, while of 41 patients treated by cholecystostomy, 8 (or 19.5 per cent) succumbed. These statistics, which are confirmed by the experience of other noted authorities on the subject, amply attest that cholecystectomy is a comparatively safe procedure in acute inflammation of the gall bladder.

However, cholecystectomy is expressly contraindicated in the event of (a) peritonitis due to perforation of the gall bladder, (b) obliteration of anatomic relationships by distention and adhesion of the gall bladder, with consequent distortion of adjacent viscera, (c) jaundice caused by obstruction of the gall bladder, and (d) extreme gravity of the general condition of the patient, particularly if the acute cholecystitis is superimposed upon hypertension, or cardiovascular or renal disease. For cholecystectomy I prefer an upper right rectus incision, which seems to afford adequate exposure, can be enlarged if it fails to provide sufficient visibility at any point of the procedure, and entails a negligible rate of morbidity in comparison with other types of incision which involve cutting of the muscle. Although cholecystectomy is performed much more expeditiously during the quiescent period of cholecystitis, the institution of the method during the acute stage is ordinarily not attended by serious hazard to the patient.

But if perforation and peritonitis have already ensued, radical surgery should under no circumstances be considered. The failure to identify important structures in the right upper abdomen during efforts to free the gall bladder from the adjacent viscera may result in inadvertent injury to the common duct or the hepatic artery. Since the presence of jaundice renders an extensive operation inexpedient, usually it is wiser merely to establish adequate drainage of the gall bladder by the performance of cholecystostomy, in the expectation that the acute inflammation will subside and the jaundice will disappear, rather than to attempt the removal of the stone in the common duct which obstructs the flow of bile. When the jaundice and acute infection have subsided, cholecystectomy and choledochostomy can thereupon be instituted with a reasonable degree of assurance. Finally, when the disease of the gall bladder manifests itself as a complication of systemic disorders, a form of surgical treatment which imposes the least burden upon the patient should be selected and employed.

In a very recent contribution to the literature Strelinger[2] presented an analytical summary of 101 cases in which a clinical diagnosis of acute inflammation of the biliary passages had been recorded. Of the 23 patients in this group who received medical treatment 2 died, 2 refused operation, 2 left the hospital against the advice of their physician, and 1 who was discharged in an unimproved state was a few weeks afterward again admitted for a cholecystostomy. Of the 16 other patients, 1 presented an extensive walled-off process which was allowed to subside without operative intervention, while none of the remaining 15 exhibited protracted symptoms of an extremely acute or even serious condition. In this nonsurgical group the mortality amounted to 8.7 per cent. Among the 53 patients who were operated upon the preoperative diagnoses of acute cholecystitis and empyema of the gall bladder were verified at operation. Some of these patients had been placed originally under medical treatment and were subjected to operation solely because of the failure of nonsurgical therapy. Grave complications (ruptured gall bladder and others superimposed upon the cholecystitis) were found in 12 patients, 8 of whom subsequently underwent cholecystectomy, with death in 4 (or 50 per cent), and 4 underwent cholecystostomy, with 3 deaths (75 per cent). In the remaining 41 cases, 23 cholecystectomies were performed, with 1 death, and 18 cholecystostomies, with 5 deaths. The greater mortality in the latter instance is attributed to the fact that the more severe cases were submitted to cholecystostomy. This study demonstrated that the mortality was highest among complicated cases treated by surgery, and greater with cholecystostomy than with cholecystectomy, was next lower in uncomplicated cases treated by cholecystostomy, followed by cases which received medical treatment, and was lowest of all in uncomplicated cases subjected to cholecystectomy.

SUMMARY

1. Acute cholecystitis is a very common condition, although its prompt recognition and management require the keenest judgment and the adoption of a moderate rather than either a radical or a conservative policy.

2. However, if symptoms of acute cholecystitis show no signs of abatement after from twenty-four to forty-eight hours, an immediate operation should be performed. Also, when symptoms recur after a brief interval of cessation in the form of a second attack, surgical intervention should be instituted at once.

3. When there is definite evidence of recession of symptoms under palliative therapy, the latter may be continued until the ensuing quiescent stage renders operative procedure less difficult and hazardous.

4. Cholecystectomy is the operation of choice in acute cholecystitis unless certain contraindications exist.

5. Cholecystostomy may be necessary if jaundice is present and the condition of the operative field greatly increases the surgical risk. Choledochostomy is practicable following the subsidence of jaundice and acute inflammation.

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PSYCHIATRY AND CRIMINAL LAW*

HONORABLE EDWARD M. CURRAN

Judge of District Police Court, recently appointed United States Attorney for the District of Columbia

Nearly two thousand years ago, as he stood meditating in the groves of the Eternal City, Marcus Aurelius, the great humanitarian emperor-philosopher, said, "Think on this doctrine—that reasoning beings were created for one another's sake; that to be patient is a branch of justice and that men sin without intending it." I wonder how often society really thinks that man sins without intending it. I wonder how many people think that in a great many instances men, because of one circumstance or another, begin a life of crime without intending it. Many discussions have been held concerning the definition of crime.

To me, in its essence, crime is a manifestation of economic movement. It is as ancient as civilization and it begins at a time older than recorded history. A competent history of crime, carried through to the development of the movement under present-day conditions, with its underlying sources and philosophy, would require a treatise dealing with human relationships over the centuries. It would concern the feudal systems, the feats of the old buccaneers, the slave traders, the caravan highwaymen of the Far East, the smugglers, the Molly Maguires of more recent times and the many others of their ilk. It would ponder alliances between those frowned upon by the law and the allegedly respectable folk who profited by their misdeeds; it would note the frequent paralysis of justice; and it would trace these characteristics of criminal history in times agone down to the present-day conditions and the activities of the modern gangster and racketeer. It would concern not only the material but the spiritual, with considerations of religion, environment and geographic mobility; the passions and the greed of men; and it would lead logically to those operations of criminal groups which we face today. And if there could be reached an understanding of the mental processes of the individuals of the various groups there could be had an understanding of the modern gangster.[1]

Day in and day out the offenders of the law file in endless lines past the bench and in the great army of law breakers are many new recruits intermingled with the seasoned campaigners. They come from all walks of life, some experiencing their first conflict, but many others not being strangers to the courts. On the judge falls the great responsibility of dealing adequately with all of them. He is called upon to direct lives into new courses. He is called upon to make many decisions which will change their futures. These duties are such that many of the strongest and ablest of men might hesitate to accept.

As time passes on, their appears to be placed into the hands of the courts more discretion in the choice of sentences. The wise use of such discretionary power is something that a conscientious judge has always before him. In the old days he did not have such discretion. Arbitrary sentences imposed by the judges during the Middle Ages led to a rebellion against judicial authority; and with the beginning of the eighteenth century a new philosophy was born and with it the struggle for the individualization of penal treatment on the basis of the character of the criminal instead of the character of the offense. No longer does a legislature attempt to specify penal treatment for the criminal *en masse*. The judge is now faced with the problem of deciding if the defendant is to be given a definite time sentence or a general or a limited intermediate sentence, placed on probation, hospitalized, or sent to an institution for mental diseases.

The determination of guilt requires a thorough knowledge of the law and the rules of evidence, secured in part through the customary legal training. But this is not enough. The judge needs, also, keen insight into psychologic processes in order to appreciate the value of testimony, and a knowledge of natural science in order to understand the importance of circumstantial evidence, which by the nature of things is likely to play an increasingly important role in courts of justice. The sentencing function demands of him not only a knowledge of psychology but of the social sciences and most of all of criminology and penology. Rare indeed is the law school in this country which gives place to any of these subjects in its curriculum, and equally rare perhaps is the lawyer who prepares himself for a judicial post by their study. We continue to graduate prospective criminal lawyers and judges with minds full of "contracts," "torts," and "negotiable instruments," but with little knowledge either of the dynamic political or economic aspects of society or of the mainsprings of human behavior.[2, 3]

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* Read before the Section on Neurology and Psychiatry of the Society, December 7, 1939.

Speaking of "prisons," Warden Lewis E. Lawes of Sing Sing Prison, New York, said, "If prisons are to prepare men for normal life outside, they must be administered, as far as possible, on a normal basis within the walls. Not years, but accomplishments should be the measure of a prisoner's confinement. In essence, prison terms should be based on the prisoner's ability to make himself useful to society—the unskilled worker to learn a trade, the illiterate to acquire the education needed to hold a job, the wanderer to find for himself a home and responsibility, the deficient mentality a lift towards a better understanding of the values of life, the cynic and pervert a saner attitude towards society and government."

What, after all, is the measure of punishment? How long should a person serve? If punishment is the crux, how much punishment—one year, two years, ten years or twenty years? How much reformation is there in that length of time in prison? Do our penitentiaries bring forth repentance? How can we analyze the human conscience? How can we analyze human agony? How can we analyze the human soul?

In Chicago, in 1931, judges were assisted in getting answers to these questions by the establishment of a psychiatric clinic. Chicago is not alone. Psychiatric approach to the solution of the problem of crime is a well-accepted practice in the criminal courts of many cities of the United States, such as New York, Boston, Baltimore, St. Louis, Milwaukee, Detroit, Pittsburgh and other large centers of population. These clinics have brought to the aid of the judges the scientific and psychiatric methods of the doctor, the psychologist and the psychiatrist.

I believe that a psychiatric clinic working in conjunction with the criminal courts of the Nation's Capital is as necessary to the successful treatment of crime as a diagnosis is to the successful treatment of a disease. In this modern age much is said concerning civil liberties, and it appears to me that the members of my own profession and also of the medical profession would not go far afield if they would give serious consideration to the question of having some method whereby an individual would not be deprived of his liberty until the court passing sentence had advantage of all available information concerning him.

Can anybody seriously contend that the work of sentencing offenders could be accomplished with anything approaching wisdom or social vision by a judge who had also to spend many hours of each day listening to the evidence which was to determine the guilt or innocence of the accused? Ought not a judge faced with this well-nigh impossible task welcome all the information he can get regarding the social history and background of men and women whom he must sentence?[3, 4]

In sentencing offenders, two extremes are possible: Either courts will sentence uniformly all offenders who have committed outwardly similar crimes—the method of Beccaria's Classical School of Penology—or they will focus attention on the offender, with the result that sentences for similar offenses will not be the same. In America today courts have, in most states, been given considerable discretion in imposing sentences. That they should have such discretion cannot be doubted in sound theory, in which it is deemed more important to fit the correctional plan to the need of the individual offender than the punishment to the abstract crime. But when analysis of sentences imposed for similar offenses discloses a wide variation among judges and among courts of like jurisdiction, there is evidently no guarantee that the result is due largely to the exercise of wise discretion instead of questionable motives and inefficiency.[5]

While a legally trained judge can act as an impartial referee during a technical trial, rule upon the exclusion or inclusion of evidence, give a legally adequate charge to the jury and perform other such functions, his education and habit of mind have not necessarily qualified him, acting alone, for the specialized task of determining the treatment best suited to various types of offenders.[6] Since this requires accommodation of legal and extra legal discipline, a reasonable conclusion is that the sentencing function should be predicated upon the recommendations of a tribunal composed of sociologists, psychologists and psychiatrists.

The arbitrary imposition of sentences is matched by the failure of the courts to recognize abnormal criminals. The clear-cut cases of insanity are easily recognized and the offender is sent to an institution for the criminally insane. But the large number of offenders afflicted with a more subtle form of mental abnormality, including the different psychoses, remain unrecognized as they pass through the courts. They are sent to the wrong institutions or placed on probation or fined, and in many cases do not receive the attention necessary for their possible adjustment or incapacitation. If the purpose of treatment is to prevent crime by incapacitation or reformation of the individual offender, the problem of who shall be incapacitated or reformed must be left to those qualified in diagnosing human nature and conduct. "Behavior experts" are not magicians. They cannot turn gunmen into choir-sopranos. But they are more qualified than the average lay judge in evaluating and interpreting the play of physiologic, psychologic and sociologic factors in the lives of men. Physicians, social workers, psychologists and psychiatrists are trained in definite technics. They obtain clinical experience. Through their major activity over a period of time, they acquire insights into the complexities of character formation and personality growth.[7]

The criminal individual is no different in make-up from other individuals. In dealing with the individual who commits offenses against laws of society, one cannot properly deal with the situation without an intimate knowledge of the individual as a whole. It is the individual who is to be dealt with and not some intangible result of that individual's reaction. The present-day method of fitting the case into some category of designation and pronouncing an arbitrary, predetermined sentence can only be subversive of the protection that society needs, as well as to destroy what possibility may have existed of converting the criminal into a useful citizen.

When a judge undertakes to impose a sentence upon a person without having before him that person's family and personal history, his education, his story of the crime and environmental factors antecedent to and contributory to the offense, together with the social prognosis indicating the possibility of restoring him to society, that judge is merely guessing as to the proper disposition of the case. We shall all agree that in imposing the sentence the judge may be honest and conscientious, but that does not change the fact that a conscientious guess of an uninformed judge is a haphazard method of dealing with the liberties of the American people.[8]

If a sentencing judge's duty and responsibility begin and end with reading the portentous penal clause of a statute that opens and shuts prison doors, then an automaton could do his work.[9]

At the present time in the Nation's Capital, in those cases which have been referred to the probation officer, there is given to the sentencing judge a typewritten report of the "pre-sentence investigation" made by the probation office. This report gives to the court much of the background material essential to a proper understanding of the case and includes family history, education, the story of the crime, environment, welfare contacts, juvenile and police records and suggested treatment. I concede that the report of a pre-sentence investigation made to the sentencing judge is of inestimable value and, together with the record of prior offenses received from the Federal Bureau of Investigation of the Department of Justice, gives the sentencing judge real equipment with which intelligently to discharge the duties of his office.

There remains, however, a serious deficiency, which I am satisfied a psychiatric clinic is designed to supply. With all the information and with all the records that we may obtain as a result of a pre-sentence investigation, we are still at a loss to know the physical, mental and emotional make-up of the offender. Is he suffering from disease? Is he feeble-minded? Is he criminally insane? Does he suffer hallucinations? Is he driven from post to pillar by a complex of persecution?

A psychiatric clinic would make available to the court a thorough analysis of the offender's physical and mental condition. The evaluation of the facts known about the offender's background, combined with a psychiatric study of the objective factors responsible for the individual's behavior pattern will assist the court, first, in determining the type of individual the offender is and, second, in discovering the motivations for the offender's conduct. With such a complete diagnosis before it, the court may then determine the best treatment procedure to be used in order that the offender may be restored to society as a law-abiding citizen.

The offender is given a sociologic, physical, psychologic and psychiatric examination. The staff of the clinic discusses each case prior to the presentation of the report to the court. The report includes a statement of the causes of the offender's misconduct, possible remedies and recommendations as to "the most desirable of available procedure to prevent future delinquencies."

The findings of the clinic should indicate to the court whether the offender should be placed upon probation, hospitalized, committed to an institution for mental diseases or incarcerated in a particular penal institution. The clinic requires the services of none but the highest trained social workers, physicians, psychologists and psychiatrists. It is a scientifically designed social laboratory for the determining of personality in character analysis for the benefit of the court.

When the judge knows the background of the offender, his make-up and psychologic response, he can intelligently distinguish between the man who should go to the penitentiary and the one who should receive treatment in a hospital. He can also distinguish between a man who can recover his sense of responsibility to society only by a jail sentence and the man of such construction and sensibilities and well-behaved past that placing him on probation is not only the humane but the sensible thing to do. One thing judges should never forget is that the fundamental purpose of criminal procedure should be to defend the social body from dangerous offenders and at the same time help those who, for causes beyond their control, find themselves impaled upon the spear point of the law.[9]

I have stressed the opinion that punishment and treatment should fit the needs of the offender and not the crime. I do not mean to convey, however, that criminals should be coddled, for certain criminals can be incapacitated to commit further crimes in the community only by punitive methods, such as execution, long imprisonment and deportation. Potential offenders can be deterred from criminal behavior by the treatment of actual offenders, by instilling in them an abhorrence for crime or the fear of being treated like criminals. Another means of preventing crime by the treatment of criminals is, of course, by their reformation and it is only in this connection that it is meaningful to speak of the individualization of treatment. Even here the infliction of pain upon criminals is justified to the extent that it has reformative efficacy.

While I do not think that we should turn our criminal courts into social clinics for the rehabilitation of criminals, yet I do believe that the medical profession has much to contribute in the way of wisdom and insight and experience and informed judgment.

To summarize, gentlemen, the "hunch" system for the determination of sentence is a very weak point in the administration of criminal law. From all sides are heard criticisms of the existing method, and conscientious and thoughtful judges are the first to condemn it. Every time a judge is about to pronounce a sentence, he is faced with a difficult and a delicate task. There is a real need for a scientific approach to this problem. The sentence based upon a guess or conceived because of a "hunch" must be abolished and in its place must be imposed a sentence commensurate with real justice, a sentence based upon a thorough study of all relevant facts and all information concerning the defendant from all possible angles and all possible viewpoints. Then and only then will true justice and real justice, as we know it, be administered.

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ABSTRACT OF PAPER READ BEFORE THE SOCIETY, JANUARY 31, 1940

"The Diagnosis of Subvitaminosis C by Determination of the Ascorbic Acid Blood Level." **Robert J. Kassan, M.D.,** Washington, **and Joseph H. Roe, Ph.D.,** Professor of Biochemistry, George Washington University School of Medicine.

The methods that have been used for the diagnosis of subvitaminosis C are: (1) Determination of the urinary excretion of Vitamin C normally and after administration orally or intravenously of "saturation" doses of ascorbic acid, (2) the Gothlin petechial hemorrhage test, (3) measurement of the time required for decolorization of intradermally injected 2,6-dichlorophenolindophenol, and (4) determination of the Vitamin C content of blood plasma. The last is the only one of these procedures that seems satisfactory for clinical purposes. The Vitamin C of the blood is best determined by a method using the photoelectric colorimeter. Visual titration methods are unsatisfactory. The generally accepted normal Vitamin C content of the blood is 0.7 to 2.0 mg. per 100 c.c. of plasma. This is believed to be too high. Of the subjects we have examined a surprisingly large number have shown less than 0.5 mg. of Vitamin C per 100 c.c. of plasma.

ABSTRACT OF PAPER READ BEFORE THE SECTION ON PEDIATRICS OF THE SOCIETY, NOVEMBER 30, 1939

"The Treatment of Meningitis Due to Hemophilus Influenzae (Pfeiffer Bacillus). A Review of 103 Cases."* **Janvier W. Lindsay, M.D., E. Clarence Rice, M.D., and Maurice A. Selinger, M.D.,** Washington.

1. Meningitis due to *H. influenzae* is relatively common in children. Excluding epidemics, it is as frequently seen as meningococcal meningitis. The average age in this series of 103 patients was 2.16 years.

2. The present treatment of *H. influenzae* meningitis with specific serum and human complement intrathecally, intravenous serum, with adequate supportive treatment consisting of transfusions, fluids, vitamin C and sulfanilamide or sulfapyridine has reduced the mortality percentage from 98 to between 70 and 75 in the hospitals equipped for the adequate treatment of meningitis. At the Children's Hospital the rate is now 74.1 per cent.

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*From the Medical and Laboratory Services, Children's Hospital, Washington, D. C.

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MUTUAL HEALTH SERVICE

Elsewhere in this issue of the Medical Annals will be found a detailed account of the Medical Society's experience with Mutual Health Service. This is no ordinary report, as a reading of it will disclose, for there can be no doubt that it has considerable significance not only to the people of the District of Columbia but to the nation as well.

Mutual Health Service was undertaken by the Society in the sincere hope that under this plan medical care could be made more readily available to the low-income group. This was emphasized in the statement released to the press by the Executive Board on April 4, 1940, which reads in part:

> "The Medical Society feels itself obligated to make public its experience with Mutual Health Service. It has in many respects been a revelation to the Society, which has been earnestly seeking better methods of providing medical care to the low-income group.
>
> "For the past several years, the Medical Society has actively interested itself in developing methods by which medical and hospital services might be made more readily available to persons of moderate means. Among the projects which it helped to initiate and which are now well established are the Health Security Administration and Group Hospitalization, Inc. Both have been successful and are serving the needs of many thousands of persons in Washington.
>
> "In the course of its efforts to devise ways and means of contributing to the health and welfare of the people of this community, the Society decided to study prepayment medical service plans which permit the patient to choose his own physician. After two years of study and with the aid of experts in this field, such a program was perfected. Approximately six hundred physicians signified their intention of whole-heartedly supporting the program, which eventually became known as Mutual Health Service. Despite the assurance that all the resources at the Society's command would be made available to persons subscribing to the Service, results of several months' effort have shown that even though there be a need, there is no widespread demand for prepaid medical service."

Unfortunately, the press did not see news value in this statement. To our knowledge, a substantial portion of it was not published in any newspaper. However, essential facts set forth in the Board's report were presented with clarity and fairness.

No unprejudiced person will read the report on the Service without coming to the conclusion that the demand for prepaid medicine has been exaggerated. It is quite apparent that a majority of people are not ready nor do they want change in the present method of providing medical care. The Society wisely left the door open in the event sufficiently large groups signify their wish to participate in the Service.

PUBLIC OPINION AND THE PHYSICIAN

Through no desire on his part, the physician has found himself very much in the public eye. He is undoubtedly the most discussed person on the American scene today. Varying accounts of his thoughts and actions are to be found in newspapers, magazines and books. Even the movies have taken him up. The result in many instances has not been too happy. This sort of thing is a new experience for the medical practitioner. If he could, he would withdraw unobtrusively from the picture. However, it is quite apparent that he will not be allowed to do so for the time being.

Naturally, where there is so much publicizing of a profession, there is a public reaction. Although its extent cannot be accurately determined, it has not been entirely favorable. And this is not surprising considering the propaganda disseminated by social theorists and comments by uninformed and sometimes unscrupulous writers.

If he has given much thought to the matter the physician has come to some definite conclusions about the whole situation. For example, he knows that as an individual he still has the confidence of the people whom he serves. His medical organizations have not fared quite so well with certain radical groups who are most vocal in their demand for change. He is impressed by the unfairness of the criticism leveled at medical organizations by persons who are not in possession of the facts or have not taken the trouble to obtain them.

The physician recognizes his shortcomings and those of his colleagues and he is not averse to their being pointed out, but distortion and untruth irk him. Especially distasteful have been the "news articles" emanating from government departments employing high-powered publicity experts. These have in many instances been designed to create an unfavorable public opinion as regards the views and actions of the medical profession.

Despite the criticism leveled at the profession in the press and elsewhere the physician is confident that it has not taken deep root in the public mind and that notwithstanding publicity experts, aided by the Hugh Cabots, the people will continue to have faith in the integrity of the medical profession.

CANCER CONTROL CAMPAIGN

A recent Gallup poll discloses what the medical profession has long suspected: that most people are uninformed about cancer. The survey reveals that 62 per cent of the people do not know any of the symptoms of this disease. These findings emphasize again the need for educational campaigns in which important facts relating to cancer control are stressed.

President Roosevelt, in proclaiming the month of April, Cancer Control Month, said "I... invite members of the medical profession, individually and through their associations, other scientific groups, all organs of opinion, including the press, the radio, and the motion pictures, and all others who have the interests of the public health at heart, to unite during the month of April, 1940, in concerted effort to impress upon the people of the United States the necessity of a national program for the control of cancer to the end that suffering may be relieved and life preserved."

In the District of Columbia, the Medical Society, the Medico-Chirurgical Society and the District Health Department are coöperating with the Women's Field Army in an educational campaign. Physicians have volunteered through the Society's Speakers' Bureau to address lay organizations. Many of them will be heard by groups in need of information. Last year some forty organizations obtained speakers from the Bureau.

Much remains to be done before the local Cancer Control Campaign will become fully effective. However, encouraging progress is being made.

COURT OF APPEALS REVERSES DECISION

There is no concealing the fact that the medical profession was disappointed when the United States Court of Appeals failed to uphold the opinion of Justice Proctor. The District Judge held that activities charged to the

American Medical Association, the Medical Society of the District of Columbia, the Harris County Medical Society, and individual defendants, did not come within the purview of the Sherman Anti-Trust Act. However, in a decision handed down on March 4, 1940, the Court of Appeals said, "We have no doubt that, reading the indictment as a whole, it states a case under Section 3 of the Sherman Act."

The Court's decision is of such significance that every physician should read it. Those who are interested can obtain a copy at small cost by calling the Society's office. Those who find time to do so would do well to read it in the library at the Medical Society's building where other documents in connection with the case are available.

Counsel representing the defendant medical organizations and individual defendants have announced that they will seek a writ of certiorari from the Supreme Court to review the decision of the Court of Appeals. It is not known when the case will come before the Supreme Court if the writ is granted.

MEDICAL BUREAU

Establishment of the Medical Bureau, a 24-hour telephone-secretarial exchange, was authorized by the Medical Society of the District of Columbia on March 6, 1940, providing 200 or more physicians subscribe to the Bureau for the first year. As the next telephone directory goes to press on April 24, 1940, and another will not be issued for six months, it is important that it be determined immediately whether a sufficient number will subscribe to permit operation on June 1, 1940.

When the Medical Society was convassed last summer, 365 members stated they would subscribe if rates were satisfactory. As the rates are based on the cost of operation, the required number should readily be obtained.

The Medical Society is in a position to render the best telephone-secretarial service to its members. Facilities at the Society's office make it possible to provide information not available elsewhere. As the Medical Bureau is a non-profit undertaking, its sole objective will be to serve efficiently. An important factor in the conduct of the Bureau will be the long experience of the Society's Secretary as manager of the Physicians' Service Bureau of Milwaukee, also a medical society-owned telephone exchange.

The Medical Bureau will serve the public and the profession in the following manner:

1. It will provide patients and others a means of locating a physician promptly when he is not in his home or in his office. This will ordinarily be done much more accurately and efficiently by the Bureau than by persons who happen to be in the physician's home.
2. It will aid physicians in locating their colleagues promptly, providing they are subscribers to the Bureau.
3. It will make appointments with patients for physicians who subscribe to the Bureau according to their instructions.
4. It will list practitioners desiring to make calls on patients in immediate need of medical attention who do not have a physician. Practitioners listed for this emergency work will be sent out by the Bureau in rotation. This arrangement has proved especially helpful to young physicians in other cities. Of course, such a list will not be limited to young practitioners.

   It should be mentioned in connection with the "emergency list" that every means possible will be taken to protect the physician against nuisance calls.
5. It will be a public information bureau for the District of Columbia, in so far as matters pertaining to medicine are concerned. This is an exceedingly important public service as physicians will recognize.

Two types of service will be offered by the Medical Bureau:

1. *Alternate Listing Service:* Under this arrangement, calls received from patients

are transmitted to the physician when he is not available at his office or home. An alternate listing appearing below the physician's office or home number in the telephone directory—"If no answer, call the Medical Bureau (number)"—will direct attention to the fact that the physician can be reached through the BUREAU. Attractive announcements for the physician's office stating that he is a subscriber to the BUREAU, as well as stickers for use on stationery, will be provided gratis.

This is a 24-hour service. No matter when the physician's calls come in, they will be transmitted to him promptly.

Subscriber's Fee: $2.75 per month.

2. *Telephone-Secretarial Service:* Under this arrangement, when the physician wishes to transfer his calls he throws a switch and the calls are then taken by the BUREAU operator as if she were in the physician's office. This is the most complete coverage which can be provided.

   Fees for this service are dependent on the distance of the physician's office from the BUREAU. Rates will be furnished on request.

Members of the Society desiring to subscribe to the Alternate Listing Service should forward the contract and notice to the telephone company in regard to alternate listing, which was mailed to them on April 1, to the Secretary of the Medical Society promptly.

Those interested in the Telephone-Secretarial Service should also communicate with the Secretary who will obtain the information desired.

PERTINENT PARAGRAPHS

March Meetings

An unusual number of meetings were held at the Society's building during March. Nearly every board, committee or section was active. Meetings held were as follows:

March 2	Cancer Control Committee
March 4	Subcommittee on Child Welfare
March 5	Membership Committee
	Obstetrical Board
March 7	Section on Neurology and Psychiatry
March 8	Subcommittee on Tuberculosis
March 11	Obstetrical Board
	Committee on Arrangements, Annual Scientific Assembly
March 14	Cancer Control Committee
March 15	Committee on Public Policy
	Section on Ophthalmology and Otolaryngology
March 19	Subcommittee on Scientific Exhibits, A. S. A.
March 21	Subcommittee on Mental Health
March 22	Grievance Committee
March 25	Board of Censors
	Executive Board
March 26	Woman's Auxiliary Advisory Committee

Private Views

Officers of the Society have on several occasions in recent months discussed the medical situation with public officials. Some of the views expressed by them would astonish the followers of the political faiths which they represent. At least two prominent officials in the present Administration have stated emphatically their displeasure with the attitude shown by the government toward medical organizations. They have also admitted confidentially that the moves by the Administration to arouse public interest in a national health program have in a number of instances been unfair to the medical profession.

It is too bad that these officials are not in a position to voice their views publicly, that is, if they are sincere in their statements, which those who discussed the situation with them have every reason to believe. Perhaps someday there will not be the restrictions upon them that there are now.

Health Insurance Bills

During the past few weeks there has been a deluge of new legislation in Congress. Among the many bills which have been introduced are several relating to medicine. Two of them relate to health insurance. One of the bills was introduced by Senator Henry Cabot Lodge of Massachusetts. Elsewhere in the Medical Annals there appears an interesting statement by Senator Lodge in connection with his bill which it is hoped physicians will read. Another bill was introduced by Senator Arthur Capper of Kansas providing for "aid in establishment and administration of state health insurance plans."

An Able Science Writer

Well-known to physicians who attend national medical meetings is Stephen J. McDonough, science writer for the Associated Press. "Steve," as he is affectionately known to his friends, is not only a competent journalist but is an exceedingly likable man. He has written on scientific subjects for a number of years and is a familiar figure at the annual meetings of the American Medical Association.

Mr. McDonough is the author of an article in the March issue of the *Rotarian* entitled "Sulfapyridine Saved My Life." In this article Mr. McDonough recounts what happened to him when he was stricken in New Orleans while he was "covering" a medical meeting. He writes not only of his experience but of the development of sulfapyridine as a therapeutic agent and has done an excellent job of both.

District Physicians Polled

In a poll taken among physicians in the District of Columbia, *Modern Medicine* reports that 90 per cent of them and 85 per cent of all doctors in the country would refuse to coöperate if medicine were federalized. According to this publication, a survey was made of all states, 20,215 physicians voting. Eighty-five per cent of the physicians who voted stated that they foresaw "a deterioration in the quality of medical service available to most people in the United States should a federally controlled and administered legislative program of socialized medicine be enacted. . . . Finally the survey shows that 85 per cent of all the United States doctors, members and nonmembers alike, are united in their approval of the platform of the American Medical Association, while 88 per cent favor the key point of the platform, namely, local responsibility, administration and control of medical services."

Annual Scientific Assembly

A number of inquiries have been received from members regarding the 1940 Annual Scientific Assembly. Despite action taken by the Society changing the dates of the Assembly and the frequent announcements that have been made in the Medical Annals and elsewhere that the Assembly would be held October 15, 16 and 17, there are still members under the impression that the meeting is scheduled for April. The announcement is, therefore, again made in this issue of the Annals that future Assemblies will be held in October. Elsewhere in this issue will be found an announcement in regard to the coming Assembly.

Wagner Hospital Bill

Hearings were held on the so-called Wagner Hospital Bill (S. 3230) on March 18. Officers of the American Medical Association who were heard on this bill were Dr. Olin West, Secretary; Dr. Morris Fishbein, Editor of the *Journal*; Dr. William D. Cutter, Director of the Council on Medical Education and Hospitals; and Dr. R. G. Leland, Director of the Bureau of Medical Economics. Final action has not been taken by the Subcommittee on Education and Labor before whom the hearings were held. The Subcommittee will give further study to this legislation.

Copies of Lectures Available

Before this item appears, copies of the lectures given in the Postgraduate Course on Syphilology will be available to those who participated in the course. Notices will also have been sent to those who enrolled. Additional copies will be available for members who did not participate in the course at a cost of $1.00. Those who have received their notices but failed to obtain their copies are urged to do so promptly.

A New State Medical Journal

An attractive publication has been added to the family of state medical journals. The first issues of *The North Carolina Medical Journal* have been received at the Society's office. Its editorial staff is to be commended on a splendid journal. Not only are the scientific articles of unusual interest but typographically it has much to commend it. Editors of the Medical Annals extend their congratulations to the North Carolina Medical Society on their new journal.

8th American Scientific Congress

A communication has been received from Dr. Thomas Parran, Surgeon General of the U. S. Public Health Service, stating that he, as Chairman of Section V, Public Health and Medicine, of the Eighth American Scientific Congress to be held in Washington May 10 to 18, extends to members of the Society "a cordial invitation to attend the meetings and participate in discussion."

Scientists from the United States and South American republics will appear on the program. Society members therefore will be afforded an unusual opportunity to acquaint themselves with the progress in the fields of nutrition, tuberculosis, cancer, chemotherapy, diseases of the heart, rehabilitation of physically handicapped children, tropical and other diseases.

A detailed announcement in regard to the Congress appeared in the March issue of the Medical Annals.

MUTUAL HEALTH SERVICE SUSPENDS OPERATION

The following report submitted by the Executive Board on the status of Mutual Health Service was unanimously adopted by the Medical Society at a meeting held on April 3, 1940:

Several months have passed since a report was made to you in connection with the Society's prepayment medical service program, Mutual Health Service. Much has transpired during this period which has significance for the medical profession and the people of the District of Columbia. It is with a deep appreciation of this fact that your Board submits a rather detailed report of the experience which has been had with the Service.

You need not be reminded of the labor involved in the development of Mutual Health Service. Month after month extensive reports were made to you indicating the immense amount of work which was being done by the Committee on Medical Economics. Numerous meetings of the Committee were, of course, necessary before a medical service program was completed and in proper shape for presentation to the Society. In the course of its preparation, generous assistance was given to the Committee by Dr. R. G. Leland, Director of the Bureau of Medical Economics of the American Medical Association, who came to Washington on two occasions to confer with the Committee.

At the time the program was announced to the public, its experimental nature was emphasized. The Committee on Medical Economics, in a report presented to the Society on December 7, 1938, stated:

> "It should be unnecessary to remind the Society that no perfect medical service program has yet been devised. Every effort, however, has been made to make the program now being submitted as sound as possible. The Committee knows that flaws will become evident when the program is actually put into operation. . . . As has been stressed in the description of the program, it is of an experimental nature; in other words, the Society is pioneering in a new field. . . . "

Because of the program's experimental nature, the Committee urged that the public be informed that the Society would do everything in its power to find a sound basis for operation so as to assure the program's permanence, but that its success depended also upon public support. On April 5, 1939, the Committee stated in its report:

> "Your Committee urges that no doubt be left in the minds of the people that a sincere effort is being made by the medical profession to meet the needs and demands of the low-income group of this community. It should also be made clear that subscribers, too, can contribute to the success of MUTUAL HEALTH SERVICE."

MUTUAL HEALTH SERVICE was organized following the Society's approval of its establishment on April 5, 1939. At that time, the Constitution and By-laws was adopted and officers of the SERVICE were elected.

Shortly thereafter, the newly elected Board of Trustees met and discussed plans for the future of the SERVICE. It was agreed that the first step to be taken was to employ an Administrator. Mr. Hugh Buhrman of Washington was chosen and began his employment on June 1, 1939. As he had had no previous medical experience, the Board and the Secretary assisted in providing him with a background for his new position. For the first month, Mr. Buhrman devoted himself exclusively to familiarizing himself with his duties.

During July and August, 1939, progress was very slow and difficult. Many persons whom it was important to interview were on vacation. However, the Administrator made every effort to bring the SERVICE to the attention of as many groups as possible.

Recognizing that the Government employees comprised by far the largest employed group in Washington eligible to participate in the SERVICE, plans were made to bring it to their attention first. This was no small task considering the thousands of persons in government service.

The Board of Trustees of the SERVICE agreed with the Administrator that the proper procedure to follow in connection with government departments was to obtain permission from their executives to circularize employees and, if possible, discuss the SERVICE with them in groups. In consequence, letters were directed by the Administrator to the Secretaries of State, War, Navy, Interior, Agriculture, Commerce, Treasury and Labor. Response was slow and in a number of instances, unenthusiastic. Several did not reply, or failed to do so until two or three communications had been sent them.

In this connection, the facts gleaned from the Administrator's report to the Board of Trustees of the SERVICE on December 5, 1939 are enlightening. His references to the following departments are of particular interest:

THE GOVERNMENT OF THE DISTRICT OF COLUMBIA:

Letters were sent to Commissioner Melvin C. Hazen by the Administrator on July 18 and August 11, 1939. Both of these letters remain unanswered. The first letter outlined the program and requested an appointment with Mr. Hazen or his representative. With the second communication a folder was enclosed describing the SERVICE. A plan was also suggested for employee circularization.

POST OFFICE DEPARTMENT:

Letters dated July 11, August 16, and September 16, 1939 directed to the Postmaster General describing the SERVICE remain unanswered.

DEPARTMENT OF COMMERCE:

A letter was sent to the Secretary of Commerce dated July 11, 1939, outlining the program and requesting suggestions as to the most effective manner of bringing the SERVICE to the attention of employees. There being no reply, another letter was directed to the Secretary on August 16 presenting a definite procedure. As no answer was received, another communication was sent on September 16. A reply was finally received on September 22 from the Director of Personnel. The Administrator was advised that nothing could be done until there was an opportunity to study the Society's plan. To date, nothing further has been heard from this Department.

BUREAU OF STANDARDS:

In reply to a letter of August 30, 1939, the SERVICE was advised that the Department of Commerce had called a halt to the distribution of literature among employees because of many hospitalization and insurance plans.

BUREAU OF ENGRAVING AND PRINTING:

A communication was directed to the Bureau on September 11, 1939. No reply has been received to date.

TREASURY DEPARTMENT:

Following letter of July 11, 1939, a conference was held with the Chief Clerk of the Treasury Department.

No action resulted, so there was a follow-up by telephone and letter on August 11 suggesting circularization. There was no reply, so the Administrator followed up again on September 16. No reply was obtained in regard to circularization. The Administrator was told by an official that the Department had given active support to other prepayment plans.

INTERSTATE COMMERCE COMMISSION:

A letter of July 22, 1939 brought a reply dated August 10 from the Director of Personnel. The Administrator called upon him August 14 and was informed that the matter would have to be taken up with the full Board of the Commission. This he was told would be late in September or October of 1939. There has been no communication received from this department to date.

DEPARTMENT OF THE INTERIOR:

A letter from the SERVICE dated July 11, 1939 to the Secretary brought a reply dated July 24 from the Chief Clerk of the Department. A conference was arranged with the Clerk on August 8. In the course of the interview the Administrator was informed that far less coöperation was being given the SERVICE than had previously been extended to other prepayment plans. It was agreed, however, that material furnished by the Society to circularize 3,000 employees would be used. Several employees reported later that they had not seen this material. However, a memorandum was forwarded to bureaus and offices by the Acting Chief Clerk stating: "It should be understood that the Department is not sponsoring MUTUAL HEALTH SERVICE and that any dealings between employees and that organization should be conducted outside government business hours."

DEPARTMENT OF JUSTICE:

A letter addressed to the Attorney General dated July 11, 1939 brought a reply dated July 18 from the Administrative Assistant to the Attorney General to the effect that an announcement regarding MUTUAL HEALTH SERVICE would be posted on the bulletin board. In a communication dated August 17, circularization of employees was requested. No reply was received to this letter. A follow-up letter was sent to the Department by the Administrator on September 20, 1939 requesting an appointment. In a letter dated September 22, the Administrative Assistant advised that he had been unable to discuss the SERVICE with the Administrator as anticipated because he had been too busy with budget hearings and related matters. He stated he had delegated the Chief Clerk to act for him. The Administrator called upon the Chief Clerk promptly, who then requested that the Administrator inform the Administrative Assistant regarding the procedure which had been followed in other government departments. This was done in a letter dated October 3, 1939. In reply to this letter, another official in the Department, the Director of Personnel, replied. He stated in part: "We regret that your request has been referred to first one source, then another. . . . We have read with considerable interest the literature which you handed to (the Chief Clerk) and have followed the newspaper accounts of the organization of this medical service. . . . Obviously, we will wish to move cautiously in aiding in the solicitation of our employees by a private organization such as yours. . . . Please feel that this is in no way a denial of your request, but merely an effort to examine in greatest detail the merits and demerits of any proposal which the management of the Department places before its employees."

Included in the departments with whom similar experiences were had were the Civil Service Commission, Department of Labor, National Labor Relations Board, United States Government Printing Office, and the War Department.

Officials of a few agencies of the government were helpful. Among these was the Department of Agriculture. This Department not only circularized 6,860 out of 12,000 employees, but the Director forwarded a friendly letter to each one of the employees. Mention should also be made of the assistance given the Administrator by the Chief of the Welfare Section. Others whose officials showed considerable interest in the SERVICE were the Railroad Retirement Board, Works Progress Administration, Federal Reserve Board, Federal Communications Commission, the Social Security Board, and the United States Public Health Service.

According to the Administrator, however, no government department, with the exception of the Department of Agriculture, extended itself on behalf of MUTUAL HEALTH SERVICE. A few minor officials and employees, it is true, were coöperative, but several said they were not interested. They gave various reasons, chief among them being that income levels established in connection with the SERVICE excluded their participation. It was evident in some instances that these officials reflected the attitude of their superiors.

A report of what has been done to obtain support for the SERVICE would not be complete without reference to the efforts made in connection with business establishments in Washington. During the first few months, the Administrator concentrated on government departments. Later, believing that the attitude of business men would be more favorable, contacts were made with the heads of several large and small business firms. Although many were indifferent, those who responded were much interested and willing to lend assistance.

Perhaps the most coöperative business institution was the Southern Railway Company. Not only was the Administrator given permission to circularize 700 employees in the Company's local offices, but the Medical Director, Dr. Glenn I. Jones, turned his office over to representatives of the SERVICE on the two days they were present to interview interested employees. In addition, Dr. Jones wrote a letter urging employees to participate in the SERVICE. Despite this assistance, there was little response, as will be disclosed later in this report.

Coöperation was also given the SERVICE by the executives of the following firms:

Ford Motor Company of Alexandria
Association of American Railroads
National Metropolitan Bank
City Bank
Bank of Commerce and Savings

A few bank officials were critical of the SERVICE because of its income levels. One stated that the plan presented many elements of a gesture by the profession whereby they would be in a position to say they had offered a plan and found there was no demand for it.

The Administrator reported these facts to the Board of Trustees of the SERVICE on several occasions, stating that it was apparent little coöperation was to be expected from government departments, and that business executives had not shown much enthusiasm. However, he pointed out that there were exceptions and that these were encouraging. By and large, however, there was passive and sometimes open resistance in the government and among certain business executives which was difficult, if not impossible, for him to combat. Your Board believes that if public officials who had so enthusiastically urged the need for such plans as the SERVICE had lent their enthusiastic support, there might have been a different story to tell, for a majority of the better paid low-income workers in the District of Columbia are in government service.

In October and November, 1939, when there was still not a sufficient number of applicants to the SERVICE to permit operation, the Board of Trustees of the SERVICE was forced to conclude that the demand would have to be stimulated by other means; otherwise, its program could not be put into actual operation. A Lay Advisory Council was created to aid in this task. Mr. Robert V. Fleming of the Riggs National Bank accepted the chairmanship of the Council. Associated with him were several prominent civic and business leaders. A meeting of this group was held. They showed considerable enthusiasm for the SERVICE. However, they did advise that in their opinion the income levels for married persons should be increased to $3,000. This proposal was taken before the Society and recommitted to the Executive Board for further study on November 8, 1939. The Board interpreted the Society's action as a rejection of the proposal.

Despite continued efforts of the Administrator, which included numerous personal contacts and circularization of large groups of employees, there was no appreciable response. The Board of Trustees of the SERVICE, taking cognizance of this situation, decided on November 28, 1939, to grant the Administrator an indefinite leave of absence without pay as of December 1, 1939. The Secretary of the Board was appointed Acting Administrator of the SERVICE. In addition, it was decided that operation of the SERVICE should begin on February 15, 1940 regardless of the number enrolled.

In his report on the status of the SERVICE on February 1, 1940, the Acting Administrator listed a group of concerns whom he had circularized with little response. It was his suggestion to the Board that an immediate report should be made to the Society's Committee on Medical Economics in regard to the situation, including definite recommendations concerning the continuance of the SERVICE. He stated that in his opinion, further expenditure of funds was not warranted and should be discontinued as of March 1, 1940. However, it seemed undesirable to terminate the SERVICE, and the recommendation was made that the public be informed that whenever there is a sufficient demand for the SERVICE, it would be placed in operation.

These recommendations were approved by the Board and incorporated in its report to the Committee on Medical Economics. That committee in turn gave its approval and urged their adoption by the Executive Board.

Perhaps the most significant part of this report is the following table showing the response of employees of organizations and institutions circularized up to February 1, 1940:

Government Agency or Business Institution	*Employees Circularized*	*Returns Received*
Dept. of Agriculture		
Budget & Finance	250	51
Information	215	20
Plant & Operations	700	94
Extension	260	95
Solicitor	425	182
Foreign Agric. Relations	70	10
Agric. Marketing Serv.	815	381
A.A.A.	1,000	74
Animal Industry	550	215
Entomology Plant Quarantine	350	99
Federal Crop Insurance	200	82
Food & Drug Administration	325	141
Forest Service	800	54
Plant Industry	600	198
Weather Bureau	300	30
Commodity Exchange Administration	100	56
Total for Dept. of Agriculture	6,960	1,782
Works Progress Administration	1,800	122
National Metropolitan Bank	100	65
American Security & Trust Co	350	190
Social Security Board	2,600	26
U. S. Public Health Service	350	6
Interior Department	3,000	10
Southern Railroad	700	1
Federal Trade Commission	650	5
U. S. Department of State	1,000	1
Federal Power Commission	550	5
Friendship House	10	
Federal Reserve System	400	1
Federal Communications Commission	500	
William Hahn & Company	150	
American Federation of Govt. Employees	10	
Nat'l Labor Relations Board	400	
R. R. Retirement Board	1,500	5
Rural Electrification	760	
Security & Exchange Commission	1,000	
U. S. Civil Service	1,000	
Veterans Administration	2,000	
Bank of Commerce and Savings	35	
Second National Bank	50	
Ford Motor Company	90	
Sholl's Cafeterias	45	
American Association of Railroads	85	
Total	26,095	2,219

Material supplied each employee circularized included a folder describing the SERVICE, a brief questionnaire in which to indicate whether or not he was interested, and in a number of instances, applications and letters from executives recommending the SERVICE. An analysis of the replies received (2,219) discloses that:

265 stated they were eligible and interested
940 were eligible but not interested
536 were not eligible but interested
473 were not eligible and not interested
5 were undecided

These are startling figures when one considers frequent public statements that there is a great demand for prepayment medical service programs. If it were not for the fact that organizations sponsoring such programs in various parts of the country have had similar experiences, one might wonder whether or not the SERVICE met the needs of the people it was designed to serve, or whether it had been properly presented to the public. But reports indicate similar disinterest elsewhere.

* * * *

On the basis of this experience, your Board is convinced that even though there be a need there is no demand among a majority of low-income workers in the District of Columbia for a prepayment medical service program. Statements made by employees with whom the SERVICE was discussed emphasize the fact that a considerable amount of educational work must be done before there will be any enthusiasm for such a program. Perhaps this is the duty of the profession. However, your Board is not prepared at this time to acknowledge this responsibility, feeling rather that the Society has met its obligations and to go further without tangible evidence of the desire of eligible persons to participate in the SERVICE would be unjustified.

From the standpoint of an investment, the SERVICE has, in the opinion of your Board, been worth while. First of all, the undertaking demonstrated the Society's sincere desire to discover, if possible, better methods of making medical care more readily available to the low-income group. As previously stated, it has disclosed in a manner no other method could, that in the District of Columbia, at least, there is no widespread enthusiasm for prepaid medicine.

* * * *

The principal objections which have been raised to the Service by potential subscribers have been the following:

(1) *That the income levels are too low.* The Society has not agreed with this criticism, yet it was heard more frequently than any other. The facts are that the majority of persons in the District are within the income levels of the Service.

(2) *That the subscriber rates are too high.* Rates of Mutual Health Service, if anything, are low. If eligible persons have failed to subscribe for this reason, there is, in the opinion of the Board, no possibility of interesting them in any self-supporting medical service program.

In view of the situation described in this report, it is the recommendation of your Board that the public be frankly advised of the experiences with Mutual Health Service and that it be informed of the Society's willingness to put the Service in operation providing groups comprising a sufficient number of eligible employees voluntarily subscribe to the Service. Further, that . . . revisions in the Service are necessary before operation is possible but that these will not basically alter the present plan.

SENATOR LODGE'S COMMENTS ON HIS HEALTH INSURANCE BILL

Editor's Note: Senator Henry Cabot Lodge of Massachusetts has shown considerable interest in medical problems. In the last Congress, the Senator introduced a health insurance bill. This legislation was not enthusiastically received. He therefore revised his bill and presented it again to Congress in this session. It is S. 3630, "A bill to amend the Social Security Act, as amended, for the purpose of providing health insurance for workers in severe economic distress and making more adequate provision for the care of the sick."

The Senator's comments on this legislation will be of interest to members of the Medical Society and are, therefore, being published in their entirety.

The importance to a nation of having its citizens healthy cannot be exaggerated and the strides which the medical profession has made towards improving the nation's health cannot be praised too highly. It is also natural and proper that government should interest itself in health. Indeed no government which purports to have the welfare of its citizens in mind could disinterest itself in a subject which is so vital to every citizen.

From the beginning of the Republic, the States and their subdivisions have done most of the work of public health and certainly there is no reason to believe that their responsibility will lessen. That the federal government has a part to play—and a significant one—is also not to be denied and it is to this that I particularly address myself here.

In studying the part of the federal government, it is well to recognize that, although the advance of medical science is inspiring, there is a deplorable amount of bad health in the United States. In this connection, the President's Committee on Medical Care, a nonpartisan body, has pointed out that one reason why persons of precarious means do not receive proper medical care is that they are unable to pay for it. To this might be added the further surmise that not only does poverty preclude proper medical care after sickness has set in; it also tends to facilitate the beginning of disease where, without poverty, it would not occur.

In studying the duty of the federal government, therefore, we are first of all struck by the fact that some bad health is due to poverty and that the federal government has never succeeded in eradicating poverty. In this aspect of the matter it would appear that the best course for the government to follow would be to try to promote the growth of real and widespread prosperity in the United States. This would undoubtedly do much to improve the general health.

Looking further into the question of inadequate medical care among large groups of people, it is well said that it is due to the following factors in the following order: first, lack of a sufficient number of general practitioners of medicine; second, lack of essential medicines and lack of essential clinical facilities; and third, lack of hospitals.

An orderly approach to the question of making more widely available a proper standard of medical care would, accordingly, work for a more widespread prosperity as an indirect attack on the problem and would in its direct attack, seek first to increase the number of good doctors and then provide medicines and clinical facilities.

Pending proposals, however, seem to approach the problem from the other end—the hospital end. This raises the question as to whether a sparsely settled section, which cannot afford to maintain a good general practitioner, can afford to maintain a hospital. And failing the necessary medical personnel of doctors and nurses, the question may well be asked whether the proposed building, even though the word "HOSPITAL" is carved over its front door, would, by virtue of that inscription become a real hospital in the finest sense of the word. It is far, far better never to go to a hospital than to enter an inferior one and there be subjected to the indescribable dangers and agonies coming from ignorant hands.

Questions like these show the need for deep and far-reaching study into all phases of this problem before final action is taken. We do not want the government to be involved in further expenditure; nor do we want any half-baked schemes to be written on the statute books. The record of the past few years proves that hasty and ill-digested legislation sets back the cause of true reform and gives a bad name to really worthwhile and progressive measures. In this spirit I am introducing a bill as an alternate to the measures now pending and for study along with all these other schemes. My bill represents a new approach to the problem; it is not yet a complete whole. I want it to be studied by the committee now considering the question and by the medical profession throughout the United States. In a matter involving the health of the American people there should be no wild experimentation; there should be no false starts.

My bill does two things: (1) It provides voluntary health insurance for workers in severe economic stress, and (2) it makes more adequate provision of those medical services and facilities which have become standardized in their nature, but which because of high cost are not used in many cases where their use would be unquestionably desirable.

HEALTH INSURANCE

Whether for reasons of pride or of unfamiliarity with our existing health system, the fact is that there are many who will not take advantage of the generous willingness of American doctors and hospitals to supply medical care free of charge. It seems desirable that some plan be devised which will, first, enable these persons to help themselves, and, second, reduce the heavy load of free cases which our medical men so uncomplainingly carry.

The first part of my bill proposes an amendment to the Social Security Act which will provide health insurance for those who are in severe economic need. Under the terms of the bill, unemployed workers who have contributed to their own protection through payroll taxes are eligible to receive adequate sums ($40) to pay doctor and hospital charges. The total cost of this plan in 1940 will be approximately $15,000,000, which is a mere fraction of the tremendous old-age fund from which the payments shall be made. According to Senate report No. 734, 76th Congress the total of the old-age reserve trust fund will be $1,871,000,000 at the end of 1940.

This is substantially the same scheme which I introduced last year and which I have redrafted so as to meet the points raised by Mr. Paul V. McNutt who, at that time, was interesting himself in these matters on behalf of the administrative branch of the government. The points raised at that time were:

1. That my bill was drafted on the basis of the original Social Security Act, instead of the amended version. This technical detail has now been cared for.

2. That the bill only sought to serve those "without means." I have added new provisions which extend the benefits to the family of workers as well as to the worker himself; which cut the period of waiting from 15 weeks to 4 weeks, and which permit larger groups to participate. I have increased the benefit payment to as much as $40 a year. The bill now includes dental service. The coverage provisions have been considerably relaxed.

3. Finally, that the bill of last year only assisted those who were in need which, according to Mr. McNutt, was inconsistent with the provisions of the existing Social Security Act. It must be apparent that if funds are limited, preference in paying benefits must be extended to some persons over certain others. No way of avoiding this dilemma has been suggested by anyone. If preference is to be extended, should not those who need this health

service the most receive the preference, assuming, of course, that existing laws governing preference are also kept in force?

I hope this measure will be acceptable to the Congress and to all Americans who acknowledge their stake in the development of a healthy America. The needy will receive immediate relief. The taxpayer will not be affected, for there are no new taxes involved. Doctors and hospitals will receive compensation for furnishing medical care to those whose slender resources hitherto have not been able to stand the strain of essential medical assistance.

Expensive Medicines

Part 2 introduces another distinct idea into the field of public health. It springs from the fact that there are at present a number of medicines, the manufacture of which has become thoroughly standardized, which are properly regarded by the layman as specific remedies for well-defined diseases. These particular medicines—unlike the majority of medicines—are so expensive that they are beyond the reach of many persons. For example, big hospitals will make gifts of small quantities of most types of medicine. For these hospitals, however, to give away the medicines to which this bill refers would be to strain their finances to a point which they could not bear.

The bill therefore provides federal aid on a matching basis to those states which have a plan for making these medicines available to those who are entitled to them. The medicines covered by the bill are as follows:

1. Sulfapyridine. Used for pneumonia, streptococcus infections and other infections.
2. Insulin. Used for diabetes.
3. Liver extract. Used for pernicious anemia and occasionally for other anemias.
4. Mercupurin ampoules and Mercurin suppositories. Used for patients with congestive heart failure.
5. Endocrine products (most of these except thyroid gland are expensive). Used for glandular and nervous disorders.
6. Vitamin preparations (Thiamine chloride, Nicotinic acid, Viosterol, Vitamin K). Used for a variety of conditions, especially nutritional deficiency.
7. Typhoid vaccine. Used to prevent typhoid fever, and is already compulsory in some states.

This list covers medicines which enter into the field of internal medicine. I hope and believe that with the publication of this bill that additional medications used in other branches of medicine, such as dermatology and obstetrics, will be proposed and included.

The same philosophy is carried into the field of medical services. It provides for federal aid on the same basis, so that persons in need of these services may obtain the use of respirators, the so-called "iron lung," and, above all, of large scale X-ray facilities. I believe it is not disputed that countless instances occur every day in which X-ray examinations are desirable—nay, essential—but are not given because of the prohibitive cost.

The suffering which could be prevented by prompt X-ray examination is indescribable. Needless to say, the prevention of disease automatically tends to reduce the cost of caring for the disease once it has been allowed to take hold. The use of respirators and X-rays involves a technique which has become relatively standardized. In the case of the X-ray, it is not inconceivable that it would become a routine part of every physical examination were it not for the cost. In the case of people of moderate means the cost prohibits its use. In the case of persons who can afford it, the use of X-ray is known to be so unusual that its prescription sometimes causes alarm.

At a later date I shall submit data showing the amount which might be initially authorized. Until the list of medicines to be provided is complete the sum to be authorized could not be stated with any exactitude. It is safe to say, however, that in comparison with the total outlay for social services in which the government is now engaged the figure would be most moderate.

This measure does not regiment. In all cases the initiative rests with the individual. He himself chooses his own doctor and his own hospital. The federal government merely gives full recognition to the work of private enterprise and simply sets up the machinery whereby the self-respecting man may help himself. Questions of medical personnel and hospital standards remain where they now are, in the devoted hands of professional physicians. The part played by the State and local governments is recognized and enhanced. There is no invitation to haste and waste.

There is no large scale splurging of money in building programs and in contracts for materials. There is no setting up of a bureaucracy or of any other obstacles between the patient and his health. This scheme is as direct as a governmental scheme can be. It provides specific, concrete, definite aid for definite diseases. It is believed that in giving every one a chance to have these medicines and services according to their ability to pay, very great good can be done.

We have taken important steps looking toward the establishment in recent years of a well-rounded, integrated social security program. Workmen's compensation for many years has provided financial aid to those who have suffered from injuries sustained during the course of their employment. Unemployment compensation aims to protect the unemployed from loss of wages. Old-age pensions should be developed which will safeguard our people from the hazards of insecurity. A well-conceived health insurance program should bring measurably nearer the day when the American people will be physically fit.

This bill is a humble first step toward this inspiring goal.

NOMINATIONS FOR ELECTIVE OFFICES

The following nominations for elective officers were made in the order shown at the business meeting of the Medical Society on March 6th, 1940:

For President-elect (One to be elected)	J. Russell Verbrycke, Jr. Henry R. Schreiber Coursen B. Conklin
For First Vice President	R. Lomax Wells
For Second Vice President	Elizabeth Chickering
For Member of Executive Board	Raymond T. Holden
For Member of Board of Censors	Thomas C. Thompson

Elections to the above offices will be held at the annual business meeting, May 1, 1940.

MEMBERSHIP

The following applicants were duly elected to membership at the business meeting, March 6, 1940:

Active Members

Harold McComb Hobart, 5402 Connecticut Avenue
Clarence Lee Miller, 3118 16th Street, N. W.
Anna Tulman-Rand, 5301 New Hampshire Avenue, N. W.

Associate Members

Charles F. Church, 1312 Seneca Lane, Bethesda, Md.
Willard Payne McNeill, 8427 Georgia Avenue, Silver Spring, Md.
Frieda Fromm-Reichmann, Chestnut Lodge, Rockville, Md.
Reuben Edwin Stone, Glenn Dale Sanatorium, Glenn Dale, Md.

The following applicants were duly elected to membership at the business meeting, April 3, 1940:

Active Members

John Gordon Bell, 1835 Eye Street, N. W.
Jesse Lee Hall, 1029 Vermont Avenue, N. W.
Benjamin James Mundell, 1616 Rhode Island Avenue, N. W.
John Alfred Reisinger, 6355 31st Street, N. W.

Associate Members

Harlon W. Harrison, Glenn Dale Sanatorium, Glenn Dale, Md.
Walter Arthur Rath, 1835 Eye Street, N. W.

The following applicants for membership will be voted on at the business meeting, May 1, 1940:

For Active Membership

Arnold Albert, George Washington University—1935
Frank Thomas Cawley, Georgetown University—1937
Robert Battey Crichton, Emory University—1922
Zigmond Meyer Lebensohn, Northwestern University—1934
Luther Wilson Gray, Georgetown University—1935
Hector Caldwell McKnew, University of Maryland—1936
John F. O'Brien, Georgetown University—1922
Henry L. Peckham, Jr., George Washington University—1934

For Associate Membership

George Martin Leiby, Vanderbilt University—1931

The following applicants for membership will be voted on at the first fall meeting:

For Active Membership

John Walter Martin, Northwestern University—1903
Joseph Bart Sheffery, Georgetown University—1937

For Associate Membership

John Louis Parks, University of Wisconsin—1934

Recent changes in membership status:

Active to Associate

William J. G. Thomas
William Dyke

Resigned

Active Member

George P. Lemeshewsky

Associate Members

Archie B. Hooton
Fred O. Tonney
Manly B. Root

MEETINGS

Wednesday, April 24: Presidential Address. "Progress and Personalities in Early French Surgery," John Hugh Lyons, M.D.

Wives are invited to attend this meeting. A buffet supper will be served.

Wednesday, May 1: Annual Business Meeting. Election of officers, etc.

Wednesday, May 8: The following program will be presented:

- "Renal Insufficiency Following Transfusion," Worth B. Daniels, M.D. Discussion by Saul Holtzman, M.D.
- "Infectious Mononucleosis: Clinical and Pathologic Considerations," Austin B. Chinn, M.D., and Lester Neuman, M.D.
- "Carcinoma of the Portio Cervicis Uteri with Unusual Skin Metastases," Edward M. Pickford, M.D. Discussion by Tomas Cajigas, M.D., and E. W. Titus, M.D.

Wednesday, May 15: The following program will be presented:

- "Staphylococcus Septicemia: Recovery Following Use of Staphylococcus Antitoxin and Transfusions from Immunized Donors," W. Warren Sager, M.D., and Oscar B. Hunter, M.D. Discussion by George Tolstoi, M.D.
- "Treatment of Occiput Posterior with Various Types of Forceps," illustrated with colored lantern slides, J. Bay Jacobs, M.D.
- "Rest and Protection Treatment of Anterior Poliomyelitis," illustrated with motion pictures, Milton C. Cobey, M.D.

NEWS AND PERSONALS

The American Association of Industrial Physicians and Surgeons will hold its 25th Annual Meeting in conjunction with the First Annual Meeting of the **American Industrial Hygiene Association** at Hotel Pennsylvania, New York, June 4–7, 1940. The convention will be devoted to the problems of industrial health in its various medical, technical and hygienic phases, with particular stress on prevention and control of occupational hazards. The medical profession is invited and urged to attend these meetings as they will be of particular interest and value to practitioners interested in industrial injuries and illnesses.

The American Association for the Study of Goiter will hold its annual meeting at Rochester, Minnesota, April 15, 16, and 17 with headquarters at the Hotel Kahler. The registration fee is $3.00.

The American College of Radiology will hold its annual meeting in New York at the Commodore Hotel, June 12, 1940.

The American Medical Golfing Association's Twenty-Sixth Annual Tournament will be held at Winged Foot Golf Club, Mamaroneck, New York on June 10, 1940. Some 250 Fellows are expected to take part in the 36-hole competition. Each contestant will play the Club's two courses. The hours for teeing off are from 7:00 a.m. to 2:00 p.m. Sixty prizes in the nine events will be distributed after the evening banquet at the clubhouse.

All members of the American Medical Association are eligible for Fellowship in the A. M. G. A. For registration application, write the Secretary, Bill Burns, 2020 Olds Tower, Lansing, Michigan.

The American College of Physicians at its meeting in Cleveland April 1–5, 1940, elected to Fellowship the following members of the Society: Drs. Henry B. Gwynn, Michael J. McInerney, John A. Reisinger and R. Lomax Wells.

The following members of the Society were elected to Associateship in the College: Drs. Samuel Benjamin, Aloysius J. B. Connolly, Linn F. Cooper, Harry F. Dowling, Joseph F. Elward, Herman S. Hoffman, Thomas F. Keliher, Kenneth F. Laughlin, Benjamin Manchester and J. Lawn Thompson, Jr.

Society members who attended the meetings of the College were as follows:

Drs. Worth B. Daniels, A. D. Daughton, Clayton B. Ethridge, Frank S. Horvath, Oscar B. Hunter, Hugh Hudson Hussey, Clapham P. King, Michael J. McInerney, Henry A. Monat, William Gerry Morgan, Matthew White Perry, R. Lomax Wells, Frank L. Williman, and Wallace M. Yater.

The Doctors' Hospital was opened for inspection March 6, 1940, and more than 6,000 persons viewed the new hospital's facilities. A special committee appointed to receive the guests included the following: Dr. William J. Mallory, Chairman, Mr. Charles E. Vadakin, Administrator of the Hospital, Dr. R. K. Thompson, Director of the Hospital Board, Dr. W. Marion Falls and Dr. J. Walter Bernhard, President and Secretary of the Dental Society of the District of Columbia, and Mr. Theodore Wiprud, Secretary of the Medical Society.

The hospital was built at a cost of $1,600,000 and was privately financed. The first patients were admitted on March 7.

A tribute to **Dr. Crawford W. Long** is being paid with a commemorative two-cent stamp which was issued by the Post Office Department on April 8. Dr. Long was the first to use sulfuric ether as an anesthetic for surgery in an operation March 30, 1842, at Jefferson, Georgia, where the stamp was first placed on sale.

Several new committees were created by action of the Society at its business meeting on April 3. They were the **Medical Bureau Committee**, the **Committee on Entertainment** and the **Subcommittees on Music and Sports**, with personnel as follows:

Medical Bureau Committee—Dr. Joseph Horgan, *Chairman*, Drs. Howard Parker and R. Lomax Wells.

Committee on Entertainment—Dr. Arnold McNitt, *Chairman*.

Subcommittee on Music—Dr. Robert Harmon, *Chairman*, Drs. William W. Chase, William M. Ballinger, W. Preston Haynes and Guy W. Leadbetter.

Subcommittee on Sports—Dr. George R. Huffman, *Chairman*, Drs. Alfred H. Richwine and William G. Puryear.

Do you need a secretary, technician, nurse, or receptionist? If so, you can obtain qualified persons through the Society's office. Many applications are on file. This service is given gratis to members.

The Section on Ophthalmology and Otolaryngology presented a round table discussion on sulfanilamide for its program March 15. The leaders were as follows: Ear, Dr. E. G. Breeding and Dr. Daniel B. Moffett; Nose and Throat, Dr. Arthur M. Zinkhan; Toxic Effect and Administration, Dr. Harry F. Dowling and Dr. Maurice A. Selinger.

The Section on Gastroenterology met April 1 at the home of Dr. William M. Ballinger to discuss problems in gastroenterology. Dr. John A. Gibson, Leesburg, Va., presented this subject from the viewpoint of country practice and Dr. Herbert E. Martyn from that of city practice.

The Section on Neurology and Psychiatry held a joint meeting April 11 with the Baltimore Neuro-Psychiatric Section at the District Training School, Laurel, Md. The following program was presented: "Recent Progress in Neurosurgery," Dr. James W. Watts; "Social Control of the Feebleminded," Dr. James Lewald; "The Central Nervous Control of Estral Behavior," Dr. Philip Bard of Johns Hopkins Hospital.

Glenn Dale Sanatorium has a vacancy for a resident physician. Qualified applicants must have graduated from a Class A medical school, served their internship and received some training in the field of tuberculosis. The salary is $2,600 per annum less $300 per annum for complete maintenance. At the present time quarters are available only for a single man. Interested physicians may communicate with Dr. Daniel Leo Finucane, Superintendent and Medical Director.

Dr. William Gerry Morgan, former President of the American Medical Association and Professor of Gastroenterology at Georgetown University, was awarded the highest distinction of the American College of Physicians at its recent meeting in Cleveland when he was made Master of the College. The honor, which was conferred upon Dr. Morgan April 3, was awarded for the first time in 11 years. He shared it with Dr. James B. Herrick, Professor Emeritus of Medicine, Rush Medical College.

Dr. Morgan was one of the early organizers of the American College of Physicians. For many years he was a Governor, then a Regent, and later Secretary-General and Vice-President. He is the author of the standard book on gastroenterology, associate editor of the Encyclopedia of Medicine and is a generous contributor to medical journals. He is Past President of the American Congress of Internal Medicine and the Medical Society of the District of Columbia.

Dr. Benjamin Karpman will speak on "Psychiatry and Culture" on Tuesday, April 30, 8:15 p.m., at the George Washington University School of Medicine. This lecture is being delivered under the auspices of the **William Alanson White Psychiatric Society** of the University.

Dr. William George MacCallum, Professor of Pathology at Johns Hopkins Hospital, was selected by the Executive Committee of the Association of American Physicians to deliver the **1940 Kober Foundation Lecture.** Dr. MacCallum's lecture on "Pathology of the Parathyroid Glands" was given in Gaston Hall, Georgetown University, March 28, 1940, the birthday anniversary of the late Dr. George M. Kober.

The Very Reverend Arthur A. O'Leary, S.J., President of Georgetown, paid a brief tribute to Dr. Kober, whose generosity has provided for the annual scientific award of the Foundation. Father O'Leary presented Dr. MacCallum with the Kober certificate and the accompanying honorarium of $500.

Dr. C. J. Van Slyke of the Venereal Disease Research Laboratory, U. S. Public Health Service, Staten Island, New York, presented a lecture on "Chemotherapy in Gonorrhea," April 12 in the Society's auditorium. This meeting was sponsored by the Subcommittee on Venereal Diseases in cooperation with the District Health Department and the U. S. Public Health Service.

The Washington Ophthalmological Society held its final meeting for the year March 25 at the Medical Society's auditorium. The following program was presented: "Some Salient Features in the Surgical Treatment of Extraocular Muscles," Dr. Avery D. Prangen of the Mayo Foundation; "Origin of Choroidal Tumors," Dr. Georgiana D. Theobald of Rush Medical College; "Carcinoma of the Eyelids," Dr. C. S. O'Brien of the State University of Iowa.

The Washington Medical and Surgical Society will hold its next meeting April 29 at the Kennedy-Warren. A case report will be given by Dr. H. J. Russell McNitt. Dr. Leo Gaffney will present a paper.

At the annual banquet to be held May 11 at the Mayflower, Mr. John Jay Daly, feature writer for the *Evening Star*, will be the speaker.

The Jacobi Society will present the following program April 15: "The Eye and Certain Related Functional Disturbances," Dr. Joseph Dessoff; "Cesarean Section," illustrated by colored moving pictures, Dr. Samuel M. Dodek.

The annual banquet will take place Saturday evening, May 4 at the Raleigh Hotel. The guest speaker will be Sir Wilmott Lewis, the well-known English journalist.

The Washington Society of Pathologists met at the Army Medical Museum March 2 and formal presentations were made as follows: "Tumor of the Skin" and "Currettings from Skin Sinus," Dr. Thomas F. Crahan; "Tumor of Testicle," Dr. Lester Neuman; "Brain Tumor," Dr. W. W. Hurteau.

The next meeting will be held Saturday, May 4, 1940.

The Washington-Baltimore Psychoanalytic Society met April 13 at the Shoreham Hotel. Dr. William V. Silverberg of New York presented a paper on "Prologue to the Study of the Jew and His Fellow Men." The May meeting will be held in Baltimore and will be open only to members.

Members of the **Pan American Medical Association** were entertained by Dr. James Alexander Lyon at Glenview Farm, March 17. Dr. Paul Dudley White, Massachusetts General Hospital, Boston, addressed the Association on "The Recognition and Incidence of the Various Kinds of Heart Disease." Lieut. Col. Henry W. Grady, Medical Corps, U. S. A., presented a paper on "Roentgenologic Aspects of Diseases of the Heart," illustrated by lantern slides.

The Clinical Club announces its annual banquet for May 7 at the Congressional Country Club.

Former Attorney General Homer S. Cummings has established a special clinic at the **George Washington University School of Medicine** in memory of the late Mrs. Cummings. The clinic will be supported by the Cecilia Cummings Research Fund and will be devoted to the study of high blood pressure and concomitant ailments. Mr. Cummings has made available to the University an initial gift of $1,200 a year for a five-year period, beginning July 1. He has also made provision for others to contribute to the Fund. The new clinic will be under the direction of Dr. Paul F. Dickens.

Dr. Paul Titus of Pittsburgh, Secretary of the American Board of Obstetrics and Gynecology, addressed the **Smith-Reed-Russell Society** at George Washington University School of Medicine, March 14. The subject of his lecture was "Sterility." Dr. H. F. Kane was host to the visiting lecturer at a luncheon at the Cosmos Club following the meeting.

The District of Columbia Dental Society has announced its 8th Annual Five-State Postgraduate Clinic to be held May 19–23 at the Willard Hotel.

The **Clinical Conference** conducted by the staff of **Children's Hospital** on March 12 consisted of a Symposium on Bronchiectasis. Drs. P. A. McLendon, Edgar P. Copeland and Edgar Davis took part in the presentation of cases and discussion.

Dr. Russell J. Fields and **Dr. H. Lynn Colvin** have been appointed delegates to the **Washington Council of Social Agencies** for the ensuing year.

Drs. Richard Lee Spire, William P. Argy and **Irving Burka** served at the **Washington Self-Help Exchange** during February, March and April, respectively, and **Drs. Elizabeth E. Chickering, Lyman J. Clements** and **Philip Litvin** served during the corresponding months at the **Goodwill Industries.**

Dr. Wallace M. Yater conducted an all-day clinical seminar for the Lehigh County Medical Society at the Sacred Heart Hospital, Allentown, Pennsylvania, on March 7, 1940.

Dr. Harry F. Dowling gave an illustrated lecture on "The Newest Treatments for Pneumonia" at a meeting of the District of Columbia Graduate Nurses' Association on March 4.

Dr. Joseph Dessoff discussed the effects of tuberculosis and syphilis upon the eyes at the District of Columbia Society for the Prevention of Blindness, March 2.

Theodore Wiprud, Secretary of the Medical Society, addressed the senior medical class of Georgetown University on April 6. His subject was "Physicians' Records."

Dr. Fred O. Tonney, formerly of Washington, has recently been appointed Health Officer of the Delta County Health Department of Escanaba, Michigan.

BOOKS RECEIVED FOR REVIEW

Acknowledgment is made of the following books which have recently been received for review:

The Patient's Dilemma. Hugh Cabot, M.D., F.A.C.S. Price, cloth, $2.50. Pp. 284. New York: Reynal & Hitchcock, 1940.

Pneumonoconiosis (Silicosis), The Story of Dusty Lungs. Lewis Gregory Cole, M.D., and William Gregory Cole, M.D. Dr. L. G. Cole is Director of Silicosis Research, John B. Pierce Foundation. Pp. 307. New York: John B. Pierce Foundation, 1940.

Tenth International Congress of Military Medicine and Pharmacy, May 7–19, 1939, Washington, D. C. Volume I: Official Reports; Volume II: Proceedings.

Non-Profit Hospital Service Plans. C. Rufus Rorem, Ph.D., C.P.A., Director, Commission on Hospital Service, American Hospital Association. Price, paper, 50 cents. Pp. 130. Chicago: Commission on Hospital Service, 1940.

Psychological Studies in Dementia Praecox. Isabelle Kendig, Ph.D., and Winifred V. Richmond, Ph.D., Psychological Department, Saint Elizabeths Hospital, Washington, D. C. Pp. 211. Ann Arbor, Mich.: Edwards Brothers, Inc., 1940.

The cost of this study and its publication have been provided from private funds, but in order to cover cost of distribution, 50 cents in stamps or equivalent should be enclosed for each copy requested and order sent to the Superintendent of Saint Elizabeths Hospital.

(*Continued from page 114*)

20. Weber, H. M.: Proc. Staff Meet., Mayo Clin., 1938, **13**, 545.
21. Kantor, J. L.: J. A. M. A., 1934, **103**, 2016.
22. Clark, R. L., Jr., and Dixon, C. F.: Surgery, 1939, **5**, 277.
23. Cutler, E. C.: New York State J. Med., 1939, **39**, 328.

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SULFAPYRIDINE—ITS NATURE AND SOME THEORIES OF ITS ACTION*

GEORGE B. ROTH, M.D.

Professor of Pharmacology, George Washington University School of Medicine

About a year ago (1938), Whitby[1] of England described a derivative of sulfanilamide which seemed to him to have advantages over the parent compound sufficiently great to justify its clinical use. The compound was at once patented in Great Britain by May and Baker[2] as M & B, 693, or Dagenan, under which designations it is now marketed in Great Britain and her possessions. The American firm of Merck and Company has obtained the patent rights to the product for its sale in this country, where it is now known as sulfapyridine.

Shortly after Whitby's announcement, intensive studies were made of the compound by both laboratory and clinical investigators in this country. This interest in the compound caused the Food and Drug Administration of the Federal Government, in accordance with the requirements of the new Food, Drug and Cosmetics Act, to conduct a survey of its toxicity and therapeutic usefulness, and about March 10, 1939 felt warranted in releasing it for sale in interstate commerce. The action taken by the government in releasing it was approved by the American Medical Association and it was accepted by that body under the name of sulfapyridine for inclusion among their tentatively approved remedies.[3]

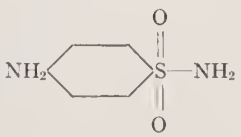
The drug should not be used clinically unless it has met the standards set for it by the American Medical Association, details of which may be found in their yearly publication, "New and Non-Official Remedies."

CHEMICAL RELATIONSHIP TO SULFANILAMIDE

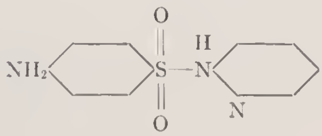
Sulfanilamide is p-amino-benzene sulfonamide; sulfapyridine is p-amino-benzene-sulfonamido-pyridine; that is, the latter is a condensation product of sulfanilamide with pyridine.

The structural relationship between the two compounds is shown in the space formulae depicted below.

Sulfanilamide



Sulfapyridine



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* Presented at the Eighth Annual Postgraduate Clinic, George Washington University, February 16, 1940.

Physio-Chemico Nature

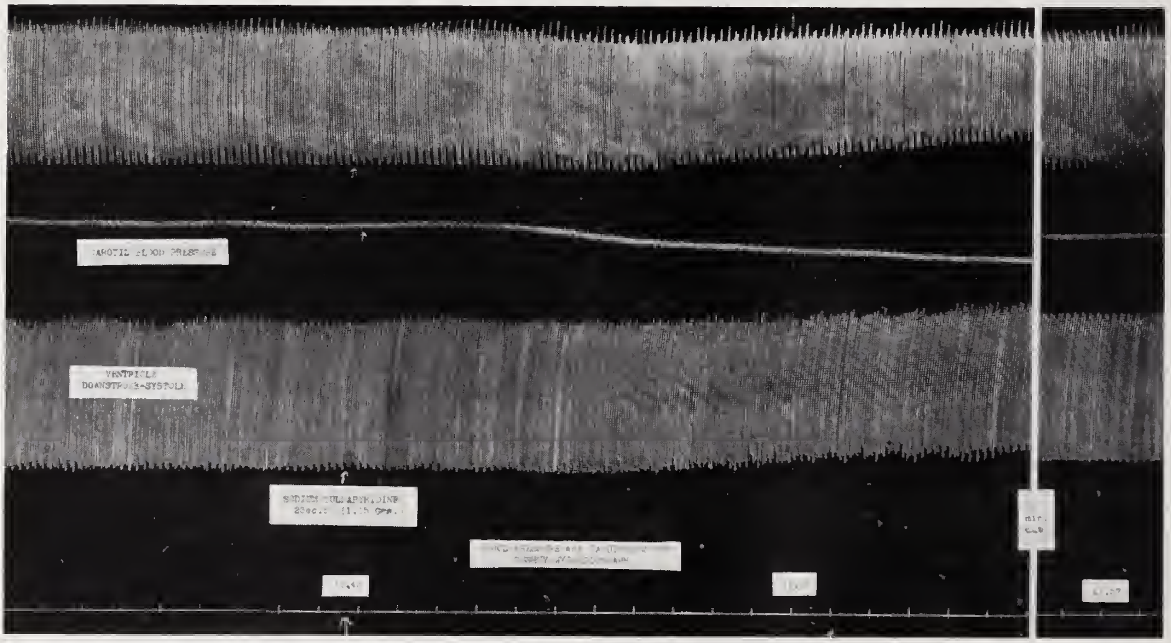
Sulfapyridine is a white, odorless, practically tasteless crystalline powder that is considerably less soluble in water than sulfanilamide. At room temperatures, sulfanilamide dissolves in water to the extent of almost 1 per cent, sulfapyridine to about 0.03 per cent, hence, only $\frac{1}{30}$ as soluble.

A saturated aqueous solution of sulfapyridine is practically neutral to litmus. It forms water-soluble salts with both strong bases and mineral acids. Marshall and co-workers[4] have succeeded in making a sodium salt which is water soluble and sufficiently stable for intravenous use. It may now be obtained for clinical use under the name of sodium sulfapyridine.

Whitby[5] has suggested that sulfapyridine be suspended in oil when intramuscular injection is desired. Objections to such method of use have been raised by Long.[6] Gaisford, Evans and Whitelaw[7] employ a 33 per cent solution of the sodium salt for intramuscular use, and have reported that it is not unduly painful or harmful when so used. They further claim that it is less liable to cause nausea and vomiting when given intramuscularly than when given intravenously.

Nature of the Sodium Salt of Sulfapyridine

Sodium sulfapyridine is strongly alkaline, having a pH of about 11, or about as alkaline as the intravenous solution of arsphenamine or sodium barbital.[8] Due to its high alkalinity, such a solution is best administered intravenously, slowly, and in dilute solution so as to avoid circulatory effects from its high alkalinity. A 5 per cent solution is isotonic with blood. Should an escape into the tissue around the vessel occur during its injection, the immediate effects would be quite similar to those caused by alkalinized arsphenamine, namely, pain, vascular spasm and obliteration of the vessel. The total amount of alkali given as sodium sulfapyridine is, however, greater than in the case of alkalinized arsphenamine or sodium barbital.



Tracing 1. Effect of sodium sulfapyridine on the blood pressure and myocardiogram of the dog

Molitor[9] found sodium sulfapyridine to be highly irritant to the stomach when given to animals orally. This seems to be the chief contraindication to its oral use, hence it is reserved chiefly for those cases requiring intravenous treatment, such as mass infection in which a high blood level of drug is required; also in those cases in which oral administration of the compound results in persistent vomiting.

As to its cardio-circulatory effects, Dr. Ligon and I have given sodium sulfapyridine intravenously in relatively large doses to both the cat and the dog and have found that in these animals it causes but a slightly depressant effect on the blood pressure and myocardiogram, followed by a prompt return toward the normal. The results obtained on the dog are shown in tracing 1 and table 1.

TABLE 1

Effect of Sodium Sulfapyridine (Intravenously) on the Carotid Blood Pressure and Heart (Dog)

TIME	BLOOD PRESSURE	HEART RATE	AMPLITUDE, VENTRICLE	AMPLITUDE, AURICLE
	mm. Hg.	*minutes*	*mm.*	*mm.*
11:42	42	154	55	50
11:43	Injected 23 c.c. 5 per cent sodium sulfapyridine (1.15 Gm.)			
11:45	20	152	53	37
11:57	38	150	55	50

ABSORPTION, FATE AND EXCRETION

Sulfapyridine is unlike sulfanilamide in its absorption from the gastrointestinal tract of both animals and man, absorption being slower, less complete, and more variable. Moreover, its excretion is less rapid than is the older or parent drug. The variability in absorption appears to be due largely to differences in solubility as well as in the fineness of the division of sulfapyridine when given in powder form.[10]

The human inactivates the drug by acetylation. Practically none of the active form is found in the blood after 24 hours. The inactive or acetylated form is largely out of the blood in 48 hours.[11]

Schmidt and Hughes[12] administered 2 grams orally to 2 human subjects and, like other observers, found that the drug circulated in the blood both as such (the free form) and as acetylsulfapyridine (the combined form). They reported that the maximum concentration in the blood occurred about 4 hours after ingestion. At this time the drug circulated mainly in the free form (about 80 to 90 per cent). The blood concentration fell slowly from its maximum concentration values, 2.7 and 2.9 mg. per cent, to 1.5 and 2.1 mg. per cent at the end of 12 hours. At the 4-hour period the conjugated form was 10 and 22 per cent of the total; at the 12-hour period, 39 and 60 per cent. Approximately 75 per cent of the drug that was found in the urine appeared in the conjugated form. Urinary excretion could account for about 65 per cent of the drug. It is probable that the remainder was lost in the feces through nonabsorption.

Essentially similar findings have been reported by others.[4, 13, 14] Long and Wood[14] found that in certain clinical cases, satisfactory blood levels were difficult to obtain due to inadequate absorption; furthermore, that the maintenance of an adequate amount of free sulfapyridine in the blood was impossible at times on account of its too rapid or too complete conjugation to the acetyl or inactive form.

DISTRIBUTION IN THE BODY

The very extensive studies of Marshall and Litchfield,[10] also of Long and Feinstone,[15] definitely show that sulfapyridine readily penetrates all body tissues and fluids and appears in them in a concentration only slightly lower than that found in the blood. It therefore resembles sulfanilamide closely in this respect, but unlike sulfanilamide it is often present in the liver in higher concentration than in other tissues. In general it is distributed according to the water content of the body with the exception of the liver and possibly the lung; the bones and fat show the lowest concentration.

A comparison of blood concentrations in the blood and cisternal fluid of the dog 4 hours after sodium sulfapyridine orally revealed a value of about 9 mg. per cent for blood and about 7 mg. for cisternal fluid. The concentration in pleural exudates is about 75 per cent of that found in the blood.[15]

The following table shows the distribution in the various organs 4 hours after administration of sulfapyridine to dogs. The sodium salt was given intravenously in experiments 1 and 2; sulfapyridine orally in 3, 4 and 5.

Sulfapyridine Content of the Tissues (Marshall and Litchfield)
Results Given in Mg. per 100 Gm.

TISSUE	EXPERIMENT NUMBER				
	1	2	3	4	5
Blood	14.1	12.2	8.7	6.3	9 0
Plasma	14.6	12.2	9.0	7.0	9.7
Corpuscles	13.4	12.4	8.3	5.3	8.6
Liver	20.5	12.1	17.7	9.4	17.0
Lung	14.6	14.6	10.0	6.7	18.7
Muscle	11.9	10.1	8.3	3.9	8.4
Spleen	11.4	11.1	8.7	3.9	8.3
Heart			8.3	5.3	8.1
Brain	11.3		7.1	4.1	
Fat	3.7		2.07	2.3	2.0
Intestine	15.3				
Skin			9.6		
Bone				2.0	

ACUTE TOXICITY

The acute toxicity of sulfapyridine like that of sulfanilamide has been shown to be low for both animals and man. Marshall and Litchfield[10] found that when each was given intravenously to dogs as the soluble sodium salt, sulfapyridine was somewhat more toxic than sulfanilamide.

When given orally to mice as sodium compounds, sodium sulfapyridine was about 1½ to 2 times more toxic than sodium sulfanilamide.

Their toxicity figures for mice are at variance with those of Wien,[16] who on the basis of the oral administration of the drugs in suspension to mice found sulfanilamide to be about 4 times more toxic than sulfapyridine.

Raiziss et al.[17] found that sulfapyridine was slightly less toxic than sulfanilamide for rabbits when given orally. However, if sodium sulfapyridine were given intravenously, it was found to be considerably more toxic than sodium sulfanilamide.

Since the work of Marshall and Litchfield[10] indicates that the toxicity of insoluble drugs cannot be determined by oral administration, we may with considerable assurance regard sulfapyridine as the more toxic of the two compounds.

A very significant laboratory observation of Marshall and Litchfield was that renal concretions could be formed readily in the dog by the intravenous use of sodium acetylsulfapyridine and not by sodium acetylsulfanilamide.

An interesting observation of Richardson[18] which is related to toxicity is that when determined on the basis of the minimal effective blood concentration necessary to produce anemia in mice, sulfapyridine is one half as toxic as sulfanilamide. Apparently more experience with each drug is necessary in order to properly evaluate them in terms of toxicity.

In this connection I am reminded of a recent statement of Dr. Theodore G. Klumpp[19] of the Food and Drug Division of the United States Department of Agriculture, who in answer to the question, "Is sulfapyridine a safe drug?," replied in substance, "Perhaps we may know the answer in ten years."

TOXIC EFFECTS IN MAN

The toxic symptoms and side actions produced in man during the therapeutic use of sulfapyridine are quite similar to those of sulfanilamide. Sulfapyridine causes nausea and vomiting more frequently than does sulfanilamide; moreover, the newer compound may cause renal calculi to form, a side effect not produced by sulfanilamide. Sulfapyridine does not cause acidosis as does sulfanilamide.

Other effects of sulfapyridine sometimes seen after its clinical use are skin eruptions, fever, cyanosis, nephritis, hepatitis, acute hemolytic anemia, agranulocytosis, leukopenia and mental confusion.

It is thus seen that the toxic effects are essentially similar to those of sulfanilamide; cyanosis is, as a rule, less marked than after the use of sulfanilamide.

The renal calculi formation is considered to be due largely to the insolubility of the conjugated form, acetyl sulfapyridine. The suggestion has been made that fluids should be forced somewhat to prevent renal calculi formation; also, that sodium bicarbonate administration tends to produce a smaller number of urinary calculi. Southworth and Cooke[20] reported 3 cases of hematuria due to sulfapyridine, in all of which the hematuria ceased when its administration was stopped and fluids were forced. Gross, Cooper and Lewis[21] made a chemical analysis of the renal concretions found after administration of sulfapyridine to rats and found them to consist of 6.4 per cent sulfapyridine and 64.1 per cent acetyl sulfapyridine. None could be produced by sulfanilamide.

SOME THEORIES OF THE MODE OF ACTION OF SULFAPYRIDINE

The mode of action of sulfapyridine is still unknown. No attempt will be made to review all the theories thus far advanced to explain its effect in disease. All theories involve one or more of three factors, the drug, the organism and the host.

The evidence in favor of the drug acting as a direct chemotherapeutic agent on the cause of the disease is not convincing. In vitro experiments show that it exerts a bacteriostatic effect mainly.[1] This together with the fact that a rather long latent period of several hours is necessary to secure an effect makes it very doubtful that the drug directly affects the cause of the disease.

Fleming[22] found that with the hemolytic streptococcus and the pneumococcus there was no bactericidal effect in test-tube cultures in the absence of leukocytes, growth being merely delayed, but that when leukocytes were present growth was permanently inhibited.

Growth of the pneumococcus could be inhibited still further when the drug and an immune serum were added to media containing leukocytes. If leukocytes were not added the great reduction of growth could not be obtained, which convinced him that leukocytes are necessary to the destruction of the pneumococci and also that these cells function best in the presence of drug and specific immune serum.

Bliss and Long[23] found sulfapyridine to be bacteriostatic against a number of organisms including the beta hemolytic streptococcus.

Reid[24] found it to be bacteriostatic in both in vitro and in vivo experiments with pneumococci.

Whitby[1] believes that the drug favorably influences pneumococcal infections by causing degenerative changes in the capsular material of the organism. This theory is upheld by Telling and Oliver[25] but is considered erroneous by Fleming[22] and also by Reid,[24] the latter showing that sulfapyridine was without effect on the capsule of the pneumococcus either in vivo or in vitro in a manner as to be ascertainable either by capsule staining or by affecting the "quelling" (swelling) reaction in the presence of immune serum.

Long and his collaborators[26] have summarized their views, succintly stating that sulfapyridine causes "changes in the morphology and somatic elements of the pneumococcus and, in certain instances, so injures these microörganisms that they are susceptible to phagocytosis by the monocytes and clasmatocytes" present in the exudates.

Reid,[24] as stated previously, could not demonstrate an effect of sulfapyridine on the pneumococcal capsule, nor could he produce an increase in phagocytosis, but in smears made from mixtures containing immune serum considerable phagocytosis was found. He could also induce bacteriostasis but not complete bactericidal action.

He states his theory as follows: "It would seem that sulfapyridine may owe its beneficial effect in pneumococcal infections to its bacteriostatic action which may permit antibodies to be formed by the body or to be acquired passively, or allow the inhibited organisms to be disposed of by phagocytosis at the normal rate."

Mayer[27] investigated the oxidation products of sulfanilamide and found that in vitro, p-hydroxylamino benzenesulfonamide was 100 times as active against the hemolytic streptococcus as sulfanilamide. He thinks it very likely that it is the intermediate agent which directly acts on the germs in vivo. Marshall[28] also found it more active in vitro than sulfanilamide, but thus far he has been unable to obtain any definite evidence that the hydroxylamine derivative is the active agent in the body.

Mellon[29] and his associates state that the bacteriostatic activity of sulfapyridine and similar compounds appears to depend upon the property of possessing anticatalase activity. Bacteria were found to form hydrogen peroxide as a metabolic product. When an anticatalase is added, the catalase normally present in cultures cannot destroy the hydrogen peroxide formed which then may act to retard the growth of the organism.

Shaffer,[30] from the work of others, postulates that both sulfanilamide and sulfapyridine owe their therapeutic and toxic activity to oxidation products that are formed under the catalytic influence of respiring tissues or organisms.

Edwards and associates[31] found that the immune responses that occur naturally in the course of an untreated pneumonia are unaltered by sulfapyridine therapy.

It appears therefore that sulfapyridine does not act as a bacteriocide, but as an agent that inhibits actively growing bacteria, perhaps through interfering with their metabolism. No experiments have been reported with sulfapyridine on oxygen consumption of actively growing tissue or bacteria, but the observations of Barron and Jacobs[32] and of Chu and Hastings[33] with sulfanilamide on isolated tissue and resting bacteria indicate that the oxygen consumption of such material is unaltered in the presence of sulfanilamide. It is therefore likely that sulfapyridine behaves similarly.

In summarizing, I shall present only what appears to me to be the main points of likeness or of divergence between the parent substance sulfanilamide and its new derivative sulfapyridine.

Their similarities are more numerous than their divergences. One of the more essential differences between them is their difference in solubility, a characteristic which will in great measure explain the more variable absorption of the less soluble sulfapyridine than of sulfanilamide from the gastrointestinal tract. However, when the newer drug enters the blood stream we are not assured of as steady a level of active form in this fluid as in the case of the older drug, due to the more variable transformation of the newer type into the conjugated or inactive form. Moreover, the lesser solubility of acetylated sulfapyridine than of acetylated sulfanilamide tends to the formation of acetyl sulfapyridine uroliths and blockage of kidney tubules. This renal damage is a side action not possessed by sulfanilamide.

The toxicity of the two drugs apparently does not materially differ, and their side actions and idiosyncrasies are about the same, the notable exceptions being that sulfanilamide alone causes acidosis and sulfapyridine, uroliths.

The distribution of sulfapyridine in the body fluids closely resembles that of sulfanilamide except that the concentration of sulfapyridine is often higher in the liver, and occasionally higher in the lungs, than that of the parent compound.

The lack of agreement among investigators makes positive statements as to its mode of action untrustworthy. About the most that can be said in this regard is that it is bacteriostatic and in addition appears to mobilize the defense mechanisms of the host. Whether it acts in the body as a direct or indirect bacteriostatic agent remains to be determined.

It is not surprising that so little is known about the mode of action of these compounds. This is also true of other so-called specifics, such as quinine and arsphenamine. I am hopeful that the combined attack to solve this problem now being made by chemists, bacteriologists and pharmacologists will soon yield positive results.

(*Continued on page 188*)

THE CLINICAL USE OF SULFATHIAZOLE IN PNEUMONIA*

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Observations on the toxicology of sulfathiazole, 2(p-amino-benzene-sulfonamido) thiazole, a new analogue of sulfapyridine prepared by Fosbinder and Walter,[1] have been reported by van Dyke and co-workers.[2] In experiments on white mice, designed to determine the comparative acute lethal effects of a single dose of the sodium salts of sulfathiazole and sulfapyridine, it was found that sodium sulfapyridine was clearly the more toxic. Whereas the LD 50 of sulfapyridine sodium was about 0.95 Gm. per kilo, for sulfathiazole sodium it was only 1.45 Gm. per kilo, when the drugs were given by subcutaneous injection. The effects of prolonged administration of sulfapyridine and sulfathiazole via the diet were studied in mice, rats and monkeys. In mice receiving the drugs for 28 days, sulfathiazole was distinctly more toxic than sulfapyridine, if the concentration of the drug fed was 2 per cent. However, no greater toxic effect of sulfathiazole was observed in mice eating diets containing 1 per cent of either drug. In growing albino rats fed over a period of 57 days, the weight curves demonstrated that sulfapyridine was the more toxic drug. In monkeys receiving these drugs daily by stomach tube over periods of 14 and 21 days, renal complications were frequent and severe in those receiving sulfapyridine but occurred only once with sulfathiazole. Metabolic studies indicated that sulfathiazole is more rapidly metabolized and undergoes much less conjugation than sulfapyridine.

In experiments to determine the comparative therapeutic effects of sulfathiazole and sulfapyridine McKee and her associates[3] report interesting results. Sulfathiazole appeared of equal value to sulfapyridine if white mice were infected with either pneumococci (nine strains), meningococcus or *Streptococcus hemolyticus*. In view of the lessened toxicity and greater metabolism of sulfathiazole they suggest that this compound may be a more desirable therapeutic agent than sulfapyridine.

A supply of sulfathiazole has recently become available to us for clinical trial.† The present report, in the nature of a preliminary note, records our experiences with this new compound in 35 patients ill with pneumonia.

MATERIALS AND METHODS

With two exceptions all of these patients received treatment at the Emergency Hospital, under the auspices of the Parmelee Pneumonia Research Fund. Each patient was studied on admission according to a routine which consisted of a complete history, physical examination, sputum typing, blood culture, hemogram, blood chemistry, urine analysis and roentgenogram of the chest. Blood counts, estimation of the nonprotein nitrogen in the blood, and urine analyses were performed at daily intervals. Blood cultures and roentgenograms were repeated as indicated. Daily blood sulfathiazole determinations were made in all cases.

No selection of cases for treatment was made. Two patients received antipneumococcal rabbit serum in addition to sulfathiazole, and were the only individuals so treated. Five patients received sodium sulfathiazole intravenously in conjunction with sulfathiazole orally, because of the unusual severity of their illness. All other patients received sulfathiazole alone orally.

Blood and urine sulfathiazole determinations were made by Marshall's method,[4, 5] previously described for sulfanilamide.

There were 31 patients in whom a pneumococcus was typed from the sputum; in the remaining 4 patients no pneumococci were recoverable. The pneumonia in two patients of this latter group was apparently caused by a mixed infection of *Streptococcus hemolyticus* and *Staphylococcus aureus*, hemolytic. In another patient, *Staphylococcus aureus*, hemolytic, was the sole organism isolated in pure culture on repeated occasions. In a fourth patient, found to have atypical bronchopneumonia, no ordinary bacteria were isolated from the sputum.

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* From the Parmelee Pneumonia Research Laboratory, Emergency Hospital; Dr. John Minor, Director.

† Through the courtesy of Dr. George A. Harrop, Squibb Institute for Medical Research, New Brunswick, N. J.

RESULTS

Age Group, Sex, Race.—In table 1 are given the age, sex and race distribution among the 35 cases studied.

TABLE 1

AGE	NUMBER OF CASES	SEX AND RACE	NUMBER OF CASES
10–19 years	2	Male white	13
20–29 years	5	Male colored	12
30–39 years	14		
40–49 years	3	Female white	4
50–59 years	4	Female colored	6
60–69 years	5		
70–79 years	2		

Day of Admission and Day Treatment Begun.—The majority of the patients were admitted to the hospital early in the course of their disease and received treatment promptly. Twenty-two patients were admitted within 72 hours of onset, and 20 were started on sulfathiazole therapy within this period (see table 2).

TABLE 2

DAY OF DISEASE (ON ADMISSION)	NUMBER OF CASES	DAY OF DISEASE (TREATMENT BEGUN)	NUMBER OF CASES
1	12	1	6
2	5	2	6
3	5	3	8
4	5	4	5
5	3	5	4
6	3	6	4
7	1	7	0
8	1	8	2

Incidence of Types, Bacteremia, Deaths.—Table 3 shows the expected higher percentage of fixed types, and a smaller number of the so-called higher types among these patients. The incidence of bacteremia was 15.3 per cent (among 33 patients in whom blood cultures were done). Four deaths occurred in this series. Two of these deaths were among individuals having atypical nonpneumococcal pneumonia. The sputum of one showed a mixed flora of *Streptococcus hemolyticus* and staphylococcus. In the other no pneumococci or other organisms were isolated from the sputum, and death followed the development of encephalitis with bulbar palsy. A third patient, with Type III infection and marked cardiovascular-renal disease showed no response to 100,000 units of rabbit serum, plus 10.5 grams of sulfathiazole. A fourth patient succumbed from a pulmonary embolus on the seventeenth day of a Type III infection after being apparently cured. The mortality rate for the entire series, both pneumococcal and nonpneumococcal pneumonia, was 11.4 per cent. Only 2 deaths occurred among 31 patients with pneumococcal pneumonia, giving a mortality rate of 6.4 per cent.

TABLE 3

Incidence of Types, Bacteremia, Deaths

TYPE	NUMBER OF CASES	BACTEREMIA	DEATHS
I	5	0	0
II	2	2	0
III	6	0	2
IV	2	0	0
VII	5	1	0
VIII	2	1	0
IX	1	0	0
XI	1	0	0
XII	1	0	0
XIV	1	1	0
XVIII	2	0	0
XXII and XXIX	1	0	0
XXIII and XXVIII	1	0	0
XXXIII	1	0	0
Hem. Staph.	1	0	0
Hem. Strep. and Staph.	2	0	1
? Virus	1	0	1
Total	35	5	4

Effects of Therapy on the Clinical Course

In the majority of these patients there was a rapid fall in the temperature and pulse rate with accompanying improvement of toxic symptoms from the disease. An early crisis was precipitated in 21 patients in an average elapsed time of 18 hours from the beginning of therapy. In 7 patients defervescence occurred by lysis. In 7 additional patients the drug apparently exerted little or no beneficial effect upon the course of the disease. The failure of this latter group to respond to the drug was not clear in every case. In a few patients the poor response could be attributed to low blood levels. In others, an unusually severe infection may have been responsible. It is interesting to note that the 4 patients whose pneumonia was not of pneumococcal origin are included in this group of failures.

The clinical response of these patients receiving sulfathiazole has compared favorably to that seen in patients treated with sulfapyridine. In some it has been dramatic; in others, the beneficial effects have been delayed until several days of treatment have elapsed. Our experience has not been sufficiently large to have noted any cases of relapse or recurrence of the infection.

Complications

Three patients developed sterile pleural effusion during or subsequent to their acute febrile period of illness. Three additional patients developed empyema and recovered following rib resection. The pneumococcal types isolated from these empyemata were Types I, II and XII and were the same types recovered originally from the sputum. Delayed resolution was noted in 1 patient. Bilateral femoral thrombophlebitis was observed in 1 patient. No other complications were present in this series.

Dosage

At the beginning of this study, sulfathiazole was administered in doses comparable to that of sulfapyridine. The drug has come to us in tablet form, each tablet containing 0.5 Gm. Four grams was given orally as an initial dose, followed by 1 gram at 4-hour intervals, day and night, until the temperature was normal for 48 hours. Subsequently the dosage was gradually reduced, but continued until convalescence was well established. Most patients were given the drug over the course of 7 to 10 days. Because the above dosage schedule resulted in disappointingly low levels of "free" sulfathiazole in the blood some of the more recent cases have been given larger doses. Accordingly, to a few patients we have administered 4 grams upon admission, 3 grams in 4 hours, 2 grams in the next 4 hours, and 1.5 grams at 4-hour intervals thereafter. The drug has been continued at this dosage until the temperature was below 100°F. for 48 hours.

The smallest amount of drug given in this series was 9 grams, and the largest, 99.5 grams. The average total dose, per patient, was 38.9 grams.

Blood Levels

Considerable variation was observed in the levels of "free" sulfathiazole in the blood. When patients were given the drug in doses comparable to that of sulfapyridine (4 grams initially and 1 gram every 4 hours), two types of response were observed. In one group of patients, after the drug had been given for 8 to 12 hours, the sulfathiazole level was found to vary between 3 and 6 mg. per cent and showed little tendency to vary from day to day on maintenance dosage of the drug thereafter. In the second group, after a comparable period of sulfathiazole administration, levels of 8 to 10 mg. per cent were found, but these levels dropped rapidly in the next 24 hours to 2 to 3 mg. per cent and did not rise to the original level on succeeding days. While many patients apparently did well on a dosage schedule comparable to that of sulfapyridine, it seemed wise to determine the effect of larger doses in order to maintain a consistently high blood level.

A few of the more recent cases were given 4, 3, 2 and 1.5 grams at 4-hour intervals and maintained on doses of 1.5 grams until a clinical effect was forthcoming. Blood sulfathiazole levels on the patients so treated were uniformly high. An example of this is as follows: A 62-year-old colored man with a Type VII pneumococcal infection was started on sulfathiazole at 4 p.m., February 23. He received 12 grams over the next 16 hours. A blood level taken at 9 a.m., February 24, showed "free" sulfathiazole of 6.97 mg. per cent. During the next 24 hours, he received a total of 9 grams of sulfathiazole, and the blood level had risen to 8.44 mg. per cent, February 25. Crisis occurred 16 hours after the beginning of therapy. The dosage was reduced gradually and the levels fell to 4.47 mg. per cent, February 26 and 1.83 mg. per cent on February 28. He made an uneventful recovery.

In our experience,[6] patients receiving sulfapyridine have a much better clinical response if the mean blood level is 6.0 mg. or above during the acute febrile period. Whether these observations may be applied to patients receiving sulfathiazole must await analysis of a much larger group of patients. From the experimental studies of van Dyke,[2] it would appear that the larger doses of sulfathiazole given to some of our more recent cases are justified in view of the rapid excretion of the drug.

Toxic Reactions

A summary of the toxic reactions observed in these patients is given in table 4.

It was early noted that patients receiving sulfathiazole had fewer gastrointestinal reactions than those treated with sulfapyridine. In this series only 1 patient had severe, and 4 patients mild nausea and vomiting. In no instance did sulfathiazole therapy have to be stopped because of gastrointestinal symptoms. Toxic reactions on the hematopoietic system were noted in a few patients. These included first, a drop in the red blood count and hemoglobin of slight degree; second, a fall in the total number of polymorphonuclear neutrophils; and third, an increase in the percentage of eosinophils during the course of therapy. The fall in red cells, noted in 4 patients, was slow and in no case was of alarming proportions. The greatest drop observed was 1,000,000 cells. The hemoglobin, however, in 1 patient fell from 65 per cent to 42 per cent in 24 hours. It was not clear whether this drop represented a toxic effect of the drug or resulted from the relief of dehydration present on admission. A progressive drop in the percentage of polymorphonuclear cells was noted in 4 patients. The maximum drop occurred 4, 6, 8 and 18 days after the beginning of therapy. In 1 patient the drop was from 81 per cent to 44 per cent in 4 days. No instance of agranulocytosis was observed. The occurrence of eosinophilia was noted in 6 patients. This was observed 2, 2, 3, 3, 7 and 18 days after the start of sulfathiazole therapy in these patients and was not accompanied by dermatitis. Drug fever was noted in 5 patients and was similar in time of occurrence to that observed in patients receiving sulfanilamide or sulfapyridine. Central nervous system reactions consisted of marked delirium in 4 patients and severe generalized headache complained of by 2 patients. Dermatitis was noted in only 1 case. The rash consisted of large maculopapules resembling erythema nodosum over the exposed surfaces of the

TABLE 4

Toxic Reactions in Thirty-Five Cases

REACTION	NUMBER
Nausea and vomiting:	
Mild	4
Severe	1
Blood:	
Drop in R.B.C. and Hgb.	4
Drop in P.M.N.	4
Eosinophilia	6
Drug fever	5
Delirium	4
Headache, severe	2
Dermatitis	1
Nitrogen retention	1
Hematuria, microscopic	1

body, chiefly the face, hands and arms, sparing the trunk and back. As to renal complications, nitrogen retention was noted in 1 patient and microscopic hematuria in another patient. Anuria has not been observed in any case up to the present time.

COMMENT

The evidence presented herewith in this report indicates that sulfathiazole is effective in the treatment of patients ill with pneumococcal pneumonia. While the incidence of bacteremia, 15.3 per cent, in this series of 35 patients, is somewhat lower than that found in a similar but larger series[6] treated with sulfapyridine, 18.8 per cent in 135 patients, the disease picture as a whole compared favorably with that usually seen in Washington among ward patients. The majority of patients here treated, 62 per cent, were suffering from pneumonia caused by Types I to VIII pneumococcus. This is further evidence that the cases observed were at least of average severity. I am cognizant of the fact that any discussion of mortality rate has little meaning in this small series. However, it is recorded here as 6.4 per cent (among 31 patients with pneumococcal pneumonia) solely for a matter of comparison with cases previously treated with sulfapyridine, which have shown a rate of 11.1 per cent.[6]

In my limited experience patients treated with sulfathiazole do as well or better than those treated with sulfapyridine. If the ability of sulfathiazole to produce an artificial crisis is any measure of its effectiveness, this has been amply demonstrated in this series. Sixty per cent of these patients had a prompt fall in temperature by crisis in 18 hours from the beginning of therapy. In addition to prompt crisis sterilization of the blood stream has been observed in all 5 patients who were found to have bacteremia on admission. While 4 of these 5 patients on admission had not more than 5 colonies of pneumococci per 1 c.c. of blood, 1 patient had 90 colonies of Type II pneumococci per 1 c.c. in the blood stream. Blood culture repeated the following day on this patient showed no growth.

The toxic reactions noted in this series were in general similar to those noted with sulfapyridine. I have been impressed with the infrequency and the mildness of nausea and vomiting. While in a few cases an occasional dose of the drug has had to be omitted because of emesis, it has not been necessary to resort to various anti-emetic measures. Most patients have taken this drug in the tablet form. I have not made it a practice to give alkalis with each dose of sulfathiazole.

No alarming toxic reaction on the blood system has been noted up to the present time. Slight drops in hemoglobin and red cell values have been observed but have not contraindicated further therapy. Several patients whose white blood counts were under 10,000 when first observed were given full doses of sulfathiazole without ill effects. We have not been able to interpret the frequent finding of eosinophilia in some of these patients. Inasmuch as it occurred at irregular intervals, independently of any dermatitis, and was not observed in the only individual who had a maculopapular eruption, it would appear to have no direct connection with this apparent sensitization phenomenon.

Kidney complications in this series were minimal. However, it is reasonable to assume that sulfathiazole, although being more rapidly metabolized, is at least potentially capable of producing these toxic reactions. Long[7] has recently observed several instances of mild hematuria and a case of anuria following sulfathiazole administration.

The larger dosage that has been employed in some of the more recent cases seems to be necessary to produce blood levels of free sulfathiazole which are therapeutically effective. The optimum level to be obtained has still to be worked out in a larger and well controlled series. In a few patients whose blood levels were low, I have employed the intravenous administration of sodium sulfathiazole and found it to be a valuable adjunct to the oral preparation. This has been given as a 5 per cent solution in distilled water in doses of 0.05 gram per kilo of body weight.

Results of sulfathiazole therapy in 4 patients with nonpneumococcal pneumonia have not been encouraging. The obvious failure in 1 patient could be ascribed to the fact that the infective agent was probably a virus, inasmuch as postmortem examination showed diffuse encephalitis. Failures in the remaining 3 with staphylococcal and mixed staphylococcal and streptococcal infection might possibly have been due to insufficient dosage. These cases were treated early in the series with an initial dose of 4 grams and a maintenance dose of 1 gram and the low blood levels which resulted may not have been sufficient to deal adequately with the infection.

Summary and Conclusions

1. The clinical use of sulfathiazole in 35 patients with pneumonia is reported.

2. The mortality rate among 31 patients with pneumococcal pneumonia was 6.4 per cent. The mortality rate for the entire series was 11.4 per cent.

3. Observations on these patients indicate that large doses of sulfathiazole are necessary to maintain consistently high levels of free sulfathiazole in the blood.

4. The toxic reactions and the effects of therapy upon the clinical course of the disease have been discussed. Attention has been called to the infrequency and lack of severity of toxic gastrointestinal symptoms. Mention has been made of the frequency of eosinophilia following the administration of sulfathiazole.

5. The experiences here reported would appear to justify a more extended clinical trial of the drug.

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New method lowers death risk of gangrenous leg amputation. A method for reducing the excessively high death rate from amputation of a gangrenous lower limb, wherein one of the blood vessels in the affected limb is tied off at a higher point than is usually the custom, is described in the J.A.M.A. for April 27, 1940 by J. Ross Veal, M.D., Washington, D. C.

His method is designed to prevent blood vessel obstructions leading to lung complications after amputation. Such complications are probably the most important single factor in the high mortality rate of amputation of a gangrenous leg, a risk which has persisted even though this was one of the earliest major operations to be performed, he says.

Dr. Veal advocates tying off the thigh vein just below the groin rather than lower in the leg, close to the point of amputation, as is usually done. High ligation, the author explains, insures good circulation in the stump, thereby eliminating the formation of blood clots which might break off and enter the general circulation.

Not a single lung complication developed in 28 consecutive amputations. There were 5 deaths from other causes. Among 275 amputations previously reported, in which the older method of ligation was used, there were 97 deaths, of which 41 (42.2 per cent) resulted from some type of lung complication. The author believes that many of these lung complications were caused by emboli.

In some persons the narrow lower part of the femoral or thigh vein may have too few or too small tributaries to insure a constant flow of blood above the ligated point. In the higher portion, however, which is wider and is near the junction with other veins, the circulation is generally good. Thus with the old low ligation blood clots may form in the lower section of the vein, extend upward to the wider portion and be swept into the general circulation.

THE "VASCULAR HEADACHE"

REPORT OF A CASE SUCCESSFULLY TREATED WITH HISTAMINE

Wallace M. Yater, M.D., F.A.C.P.
Professor of Medicine, Georgetown University School of Medicine

In April 1939 Horton, MacLean and Craig[1] of the Mayo Clinic described a new syndrome of vascular headache. They considered this syndrome to represent "a distinct clinical entity, classical in its symptomatology and unique in its response to histamine."

Within 18 months they had observed and treated 84 patients afflicted with this headache. The majority of the patients, usually in the fourth and fifth decades of life, denied periodic headaches in their earlier years and did not present familial or hereditary histories. The bouts of pain occurred from two to twenty times a week, appeared and disappeared quickly, and lasted for from 15 minutes to several hours. The attacks occurred day and night, often at the same time day after day, with spontaneous remissions and exacerbations, the latter usually lasting at least a year.

The pain was limited to one side of the head; it was a constant, excruciating, burning, boring pain involving the eye, the temple, the neck, and often the face, frequently with marked tenderness on pressure over the branches of the external carotid and common carotid arteries. Phenomena of vasodilatation on the same side of the head accompanied the pain; these consisted of swelling of the temporal arteries, engorgement of the soft tissues of the eye, injection of the conjunctiva, plugging of the nose, profuse watering of the eye and nose and flushing of the side of the face. Scotomata and gastrointestinal upsets were not associated with the headache.

The use of alcoholic beverages usually caused exacerbations, but abstinence did not result in cure. Partial relief was afforded in many cases by the early use of salicylates, by making strong pressure over the eye and temporal vessels, or by digital compression of the common carotid artery on the side of the pain.

Horton and his associates were able to produce the syndrome by the subcutaneous injection of 0.3 to 0.5 mg. of histamine and often were able to control an attack so induced or appearing spontaneously by the intravenous administration of epinephrine and other vasoconstricting agents.

During attacks the cutaneous temperature readings ranged from 1° to 3°C. more on the affected side of the head.

All of the observations made indicated that the syndrome is caused by abnormal vasodilatation. Although vasodilatory phenomena have been demonstrated in migraine by Wolff,[2] the new syndrome bears only a superficial resemblance to that common malady. The results of treatment indicate further the complete separation of these two headaches, since the vascular headache can often be cured or relieved by a series of histamine injections, whereas the course of migraine is not altered thereby.

Since the original description of this vascular headache appeared I have been on the lookout for cases. I have asked many seasoned clinicians whether they have observed such cases, and usually they have answered in the negative. Recently a patient presented himself for treatment who had made the diagnosis himself from a description of the headache in a newspaper.

Report of Case

Mr. H. H. B., a printer aged 30 years, had had severe headaches for 10 years. During the first 8 years they occurred on the right side of the head and face, but following an alcoholic injection somewhere on the right side of the face the attacks ceased for about 6 months; and when they returned they were present on the left side. With the exception of this and two other remissions the attacks occurred almost daily, both day and night. There were from one to three attacks daily, with the occasional skipping of a day. The pain started behind the eye and spread over the side of the face. There was flushing of the skin on the affected side, and the eye, which became sensitive to light, became practically closed, and watered. The onset and cessation lasted about 5 to 10 minutes, and the attacks varied from 30 to 90 minutes in duration. Excitement sometimes seemed to precipitate an attack. Partly because of the headaches the patient began to drink whiskey and admitted a consumption of a half pint daily. He thought the headaches were less severe, and when he stopped drinking a week before he was examined they continued in severe form.

Numerous examinations had been made and various therapeutic modalities tried. The eyes and sinuses had been exonerated. Because the patient had voluntarily eliminated various foods from his diet, vitamin B deficiency had been suggested, but substitution therapy did not afford much relief. Removal of an impacted molar 4 years before was followed by a short remission. From August 1939 to January 1940 there were few attacks; during this time he was away from home and not working. His work as a monotype operator presented no important industrial hazard. The domestic situation has been unsatisfactory. No other members of the family are known to have had headaches.

The previous medical history did not appear to be relevant. The patient drank two cups of coffee daily and smoked about 30 cigarettes. He slept from 8 to 10 hours nightly.

The physical examination was essentially negative except for evidence of mild chronic prostatitis. The urine contained a small number of leukocytes with an occasional clump.

Because of the close resemblance of the headaches in this case to those described by Horton and his associates, histamine therapy was instituted. The patient was instructed to give the injections to himself. A 1–10,000 solution of histamine phosphate was employed. On the first two days one-fourth c.c. was injected twice daily, on the third and fourth days one-half c.c. twice daily, on the fifth and sixth days three-fourths c.c. twice daily, and on subsequent days 1 c.c. twice daily. Horton recommends a total of 28 or 30 c.c., but the patient continued the injections until he had used 50 c.c. No reactions to the injections occurred.

From the first day of treatment no severe headaches have occurred. The patient states that since the completion of therapy on March 9 there have been no headaches.

Discussion

It appears likely that this is a case of the "vascular headache" described by Horton, MacLean and Craig. However, one cannot entirely eliminate the psychotherapeutic effect of the injections. The shift of the painful attacks from the right to the left side is unusual.

If the "vascular headache" is a clinical entity, its etiology has not been established, even though immunization to histamine cures it. This form of headache is not migraine, and the latter cannot be cured by histamine injections. The "vascular headache" apparently is not common.

In some of Horton's cases there was recurrence of symptoms, but a second course of treatment again produced a remission. A few patients did not obtain relief. How long patients remain "cured" has not been determined. Horton is having some patients take a weekly injection of the histamine solution (1 c.c.) as a maintenance dose.

In summary, the main characteristics of the "vascular headache" are:

1. Absence of familial or hereditary history.
2. Chronicity with exacerbations and remissions.
3. Occurrence day or night.
4. Acute onset and ending of the individual attack.
5. Relatively short duration of the individual attack.
6. Unilateral involvement of the eye, temporal region, face and neck.
7. Flushing of the side affected, engorgement of the soft tissues of the eye, injection of the conjunctiva, and profuse watering of the eye.
8. Absence of scotomata and vomiting.
9. Precipitation by the injection of histamine, and relief by the injection of epinephrine.
10. Cure by immunization to histamine.

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THE NEW LAW FOR THE COMMITMENT OF THE MENTALLY ILL*

Roger S. Cohen, M.D.
Washington

Certain changes have taken place during the past two years in the law relating to the commitment of the mentally ill in the District of Columbia. On account of the fact that the new law passed by Congress in 1938 was amended in 1939 and, further, on account of the fact that the amendments were the subject of much discussion in the Society last spring, a great deal of confusion has arisen in the minds of many as to how the law operates and what procedures are necessary to take care of the mentally ill. As a result, relatives and patients have been misinformed as to what procedures are necessary for commitment.

As far back as 1898 an attempt was made to do away with compulsory or, in legal terms, mandatory jury trials for persons alleged to be of unsound mind, but for forty years thereafter thousands of patients were paraded before the public eye in the courtroom for the purpose of having a jury of 12 entirely uninformed laymen pass judgment on their soundness of mind or lack of it. Just as many, or perhaps more, relatives were put in the embarrassing position, to say the least, of having to testify in open court that they thought the patient in need of treatment. Finally, in 1938, with pressure from various groups and without any opposition to speak of, Congress passed a law doing away with mandatory jury trials and substituted for them a Commission on Mental Health. This doing away with jury trials is by far the most important change in the law. The chief function of the Commission on Mental Health is to pass upon the mental condition of the patient and his need for treatment and then to forward its findings to the Court. This Commission includes 1 lawyer member who is designated as Chairman and who serves fulltime; we have been fortunate enough to secure the services of an extremely able attorney, Mr. T. Gillespie Walsh, who had had many years' experience in the Juvenile Court and the Public Assistance Division, making him well prepared to handle legal matters of a sociologic nature. In addition, there are 8 part-time physicians, each of whom has had at least 5 years' psychiatric experience and who rotate throughout the year in such a fashion that 2 serve together for a period of 3 months each. The Commission holds private, informal hearings at Gallinger Municipal Hospital usually twice a week and at Saint Elizabeths Hospital usually once a week. These hearings lack the publicity and formality of the old-style hearings in Court, and the patient and his witnesses are allowed to say whatever they wish without invoking the rules of legal evidence. The people present at these hearings are the 3 members of the Commission, a stenographer, a representative of the Board of Public Welfare, the patient, his friends and relatives, and any other witnesses who are essential. The patient, of course, has the right to be represented by a lawyer if he so desires, and if he lacks funds for a lawyer the Court appoints one to serve for him. Hearings are also held in homes or general hospitals in those cases in which it is unwise to move the patient for reasons of physical infirmity. Occasionally, too, hearings are held at the office of the Commission.

Without going into too much detail, the Commission makes one of the following findings which are listed in the order of frequency:

1. That the patient is of unsound mind and should be committed to Saint Elizabeths Hospital if a resident of the District of Columbia; if a nonresident, provision is made for him to be sent to the hospital in the state in which he resides; or if he is a veteran, he can be committed to the care of the Veterans' Administration for transfer to a Veterans' Facility.

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* Read before the Society, January 17, 1940.

2. That he is of sound mind and should be immediately discharged.

3. That the condition of the patient requires further study or that his illness will probably be of short duration; in these cases, a continuance of a period up to 30 days is requested.

4. That the patient is of unsound mind but harmless and can be discharged to the care of his relatives; this, I believe, is one of the best provisions of the new law.

The findings of the Commission are immediately submitted to the District Court, which may or may not approve these findings, but in every case so far the Court has approved them.

The patient is given a copy of the Court's order committing him, discharging him, or recommending a continuance. In case the patient is found of unsound mind, the Court order informs him that he has 5 days in which to ask for a jury trial if he disagrees with the findings of the Commission. It is certainly worth pointing out in this connection that during the year and a half or so of operation of the Commission, less than 4 per cent of the patients have requested a jury trial, and in no case has a relative made such a request, although relatives too have this prerogative. In case no request is made for jury trial, the patient is transferred 5 days later from Gallinger Hospital to Saint Elizabeths Hospital.

Much of the controversy in this Society last spring concerned the so-called 10-day provision of the law of 1938. This provision made it impossible for a patient to be transferred from Gallinger Hospital to Saint Elizabeths Hospital until 10 days had elapsed from the time the patient received a copy of the order of the Court. This undesirable section of the original Act resulted in unnecessary overcrowding at Gallinger Hospital and was amended in the Act of 1939 so that a patient who needs immediate treatment at Saint Elizabeths Hospital, or one who becomes unmanageable at Gallinger Hospital, can be transferred almost immediately. In fact, this, to my mind, is the chief amendment from the medical point of view made by the Act of 1939.

Two other matters which the Commission considers at its hearings are residence and ability to pay. As noted above, if the patient is a nonresident, an attempt is made to ascertain of what state he is a resident, and he is transferred to the proper hospital. Here I wish to point out that residents of nearby Maryland and Virginia, even though they work in the District of Columbia, have no claim for care at Saint Elizabeths Hospital, and they should not be sent by physicians to Gallinger Hospital with the idea of being transferred to Saint Elizabeths Hospital. Needless to say, they belong in their respective state hospitals. The Commission considers the ability of the patient's estate or of the relatives of the patient to pay in part or entirely for care and treatment at Saint Elizabeths Hospital, which at the present time is at the rate of $1.80 a day or $54.00 a month. I have been informed that this has resulted in the saving of a considerable sum of money to taxpayers, since this method is a great improvement over the former one.

I hope that the foregoing has made clear the principal points of the new law, but I believe that, before closing, some explanation is due to you concerning various practical details of the operation of the law. If you are called in to see a mental patient and if the family agrees to hospitalization, the simplest course to follow is to have a relative go to the Permit Office, now located at 515 D Street, and secure a permit for the admission of the patient to Gallinger Hospital for mental observation. If you see the patient after the closing of the office at 4:30 p.m. or on Saturday afternoon or Sunday, you will always find the admitting physician at Gallinger Hospital most accommodating in admitting the patient until such time as a permit can be secured. On the other hand, if trouble in getting the patient to go to Gallinger Hospital is anticipated, it is usually better to avail oneself of a provision of the law and to secure an order from the Court directing the

United States Marshal to take the patient into custody merely for the purpose of sending him to Gallinger Hospital for observation. There the patient is, of course, examined by the staff, and if commitment is considered a possibility he is then referred to the Commission on Mental Health, the members of which examine the patient twice during his stay there or at Saint Elizabeths Hospital if he is transferred to that hospital before the hearing. The average stay of the patient at Gallinger Hospital is about 3 weeks. In some cases the testimony of the doctor who sends the patient to Gallinger Hospital is required at the hearing, but the Commission always tries to hold these hearings first, thus taking as little time as possible from the doctor.

In the case of a quiet, nonsuicidal patient who is at home or in a general hospital and is perfectly willing to go to Saint Elizabeths Hospital (and these are rare indeed), the necessity for going to Gallinger Hospital may be entirely obviated by entering into the necessary negotiations at the office of the Commission. In these cases, hearings can be held at the home or at the general hospital. Let me state, however, that much "red tape" must be run through, a lawyer hired and paid, and a period of about 3 weeks must elapse before the patient can go to Saint Elizabeths Hospital. Certainly, this is a very impractical method, and I hope something may be done to remedy the condition.

In the year and a half of operation of the Commission on Mental Health, we feel that a real advance has been made in the disposition of the mentally ill. The procedure is not perfect, however, and any suggestions for better operation will be welcomed.

GRANULOMA RESULTING FROM PENETRATION OF TALCUM POWDER

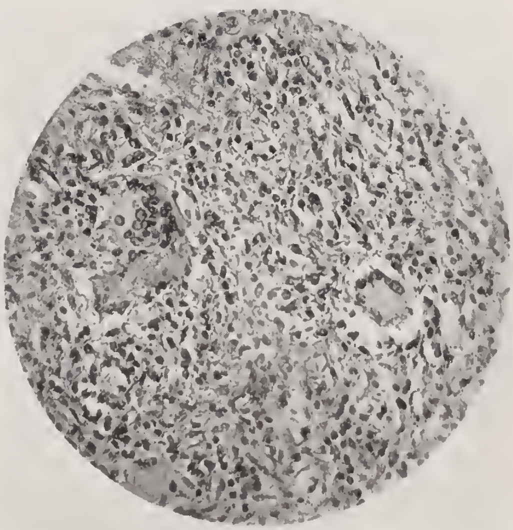
REPORT OF A CASE

Eugene de Savitsch, M.D.
Washington

A young woman, 29 years of age, consulted me on March 5, 1939 about a swelling under her left arm. She stated that she had had it since 1935 when, following a fracture of the spine, she was obliged to wear a brace for almost a year. The brace was intended to support the entire lumbar spine and was fitted tightly around the body so that both edges rested in the axillae. The contact with the edges caused considerable irritation of the skin of the axillae, especially on the left, which the patient tried to alleviate by using a great deal of talcum powder. A mass developed in the left axilla; at first it was a very small one, but it gradually grew in size and once in a while would suppurate. After preliminary treatment with hot packs it was excised under local anesthesia. Great difficulty was encountered since the subcutaneous tissues as well as the skin were so thoroughly indurated as to appear almost solid.

The histologic study of the excised specimen revealed a granuloma which in many ways resembled a tuberculous one. Subsequent and uneventful healing of the lesion as well as its history and a negative bacteriologic examination militated against this diagnosis.

The section showed an essentially normal skin with numerous sweat glands and a subacute granuloma in which there were a great number of irritation-type giant



Granuloma resulting from penetration of talcum powder cells. A diagnosis of nonspecific granuloma was made, the lesion undoubtedly having been caused by the penetration of talcum powder into the subcutaneous tissues.

I observed a similar type of granuloma in one of my cases in the Belgian Congo where the natives occasionally use a mysterious concoction of sand and herbs which they rub into the skin for medicinal purposes.

ABSTRACT OF PAPER READ BEFORE THE SOCIETY, JANUARY 10, 1940

"THE TREATMENT OF ALCOHOLISM, A PSYCHONEUROSIS." **Edward A. Strecker, M.D., F.A.C.P.,** Professor of Psychiatry, University of Pennsylvania School of Medicine, Philadelphia.

Alcoholism is a psychoneurosis, and nonpharmacologic therapy constitutes the more satisfactory method of treatment. Adherence to faith in psychologic reëducation rather than in drugs is expressed by the definition of a chronic alcoholic: "He is the man who cannot face reality without alcohol and whose adequate adjustment to reality is impossible as long as he uses alcohol." There is little to be anticipated from drugs, since (1) many years of experience have demonstrated that enduring recoveries are not obtained by drug treatment, (2) in alcoholism there is not a specific and fundamental structural pathology, and (3) careful study of many individual alcoholic patients reveals clearly that the alcoholism is a psychoneurosis.

The conclusion that true alcoholism is a neurosis rests on the following premises: 1. The selection by the potential alcoholic of the narcotic alcohol shows that alcohol in effect is "phantasy in a bottle" and provides the speediest escape technic, insuring the obliteration of internal conflicts and environmental difficulties. 2. The individual who is in the greatest danger of alcoholism is preponderantly an introvert. The analyses of the prealcoholic personalities of many alcoholic patients reveal that not only were the greater number markedly introverted, but show also that the basic pattern of the introversion is emotional immaturity usually woven in childhood from the environmental ingredients of parental loving dominance. 3. The symptomatic patterns of alcoholics and psychoneurotics closely resemble each other. The psychoneurotic utilizes his symptoms to shut out reality, and the alcoholic employs alcohol for the same purpose. They both achieve a high degree of unconscious camouflage of real motivations or rationalization. 4. Both psychoneurotic and alcoholic patients are sexually maladjusted. It is not agreed that there is a larger segment of latent homosexuality in alcoholics than in psychoneurotics. In each group there is a latent heterosexuality. In alcoholism there is a notable inability to deal with sex in its completion and there is only a fractional acceptance of sexual life. 5. The reversibility of psychoneurosis and alcoholism is shown by the substitution of alcoholic excess for neurotic symptoms and the reverse; neurosis for alcohol is often seen clinically.

The plan of treatment falls into 4 categories: 1. Rules. 2. Psychologic therapy. 3. Reëducational training. 4. Physical therapy. There are few rules, but they are important. The patient must have some recognition of his need for help and he must not be bullied or tricked into coming to the therapist; he must be willing to try to work out a nonalcoholic future; he must be frank and honest in all his dealings with the therapist and, above all, in the event of a relapse he must notify the therapist or see that he is notified as soon as possible.

Only the high points of the psychologic aspects of treatment may be mentioned: 1. An impersonal, objective, nonemotional attitude on the part of the therapist. 2. While the reasons which induced the alcoholism are intensively investigated, there is included, of necessity, a careful study of the entire life history of the patient, with a particularly close scrutiny of the past and present factors underlying his emotional immaturity. 3. The production of a conditioned thinking reflex, with a positive element of never repressing alcoholic thoughts as they arise, but of utilizing them in order to view again and again the whole panorama of the alcoholic past, and a negative element of anticipation of nonalcoholic satisfactions. 4. From the very beginning a refusal on the part of the therapist to deal with anything but the mature segment of the patient's personality. Therefore, the patient learns to make his own decisions in his life, even including those things which have to do with alcohol, for instance, whether or not alcohol is to be kept in his house. 5. The patient must learn that he cannot get well for any emotional reasons, but only because he himself comes to appreciate the necessity of a nonalcoholic future. 6. Motor relaxation is purposely induced at each treatment period in order to minimize the distracting effect of alcoholic thoughts and to provide mental soil receptive to the implantation of simple suggestion. 7. The main objective of the psychologic phase of treatment is to produce emotional maturity; the recovery from the alcoholism is an inevitable byproduct.

A few of the reëducational aspects of the treatment are as follows: 1. The reading of a standard book on alcoholism and the making of notes in order to get a detached viewpoint. 2. The patient is encouraged to make each night a schedule of daily activities, which he

(*Continued on page 188*)

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OUR DUTY

These are days that try men's souls. With most of the nations of Europe engaged in the most destructive war in all history, the future looks dark indeed. In our own country, which is one of the few still at peace and resolved to remain so, there is justifiable pessimism, fear and uncertainty.

Uppermost in the minds of our people is the hope that we can stay out of war. Many are haunted by the thought that anti-democratic forces may be victorious. Anxiously from day to day they watch developments with hope and prayer in their hearts.

What does the future hold for peaceful America? Of course, no one knows or would dare to prophesy. However, there are conclusions about which we may well be certain. One is that the war will deeply affect the United States, whether or not this country becomes directly involved in the struggle. Millions of lives and property of incalculable value cannot be destroyed without having a profound effect on the whole world. Further dislocations in our social and economic order are therefore inevitable. What ultimate effect this will have on the lives of our people, one can only conjecture.

If these conclusions are accepted, a heavy responsibility rests upon the medical profession for the health of the people. The profession would therefore do well to determine now how it can best fulfil its obligations. Aside from important scientific considerations, it is quite evident that better organization will be essential. For the task ahead will not be one for a few individuals. Able leadership will be necessary. Of more importance, however, will be united and strong professional organizations able and willing to cope with the problems which will arise.

Anyone who knows anything about medical societies is familiar with the indifference of many physicians to their organizations. This situation must not be permitted to continue. By some means, they must be aroused from their lethargy before the profession comes face to face with the vital matters which will confront it during and after the present war.

HOSPITAL BILL REPORTED TO SENATE

On April 30, the Senate Committee on Education and Labor recommended the so-called Wagner-George Hospital Bill (S. 3230) for passage. Several changes were made in the original bill, some of them suggested by representatives of the American Medical Association. For an analysis of the bill, readers of the MEDICAL ANNALS are referred to the May 11 issue of the *Journal of the American Medical Association.*

The report of the Committee on Education and Labor in connection with this bill is enlightening for it makes clear the objectives of the proponents of this legislation. Excerpts of particular interest and significance to the medical profession, especially in the District of Columbia, follow:

> "In proposing legislation to promote hospital construction the President has a broader vision of purpose than the mere supplementing of beds on which the sick may lie. The hospital is the doctor's workshop and contains the tools of his trade—expensive diagnostic and therapeutic equipment—without which he cannot practice modern scientific medicine. In rural areas the doctor's efficiency is increased tremendously by a general hospital. It becomes the center of the health activities of the community,

not only for the cure of illness, but for its prevention as well. The hospital as a public diagnostic center enables the doctor to provide better service in the home and for the ambulatory sick treated in his private office. Through its laboratory the hospital offers the means for services essential to the saving of lives, such as the immediate typing of sputum in pneumonia, the rapid determination as to whether cancer exists in excised tissues, the pathological nature of the body fluids and excretions, and other determinations which make diagnoses scientifically accurate.

"In addition to bed accommodations and added facilities for preventive and curative medicine, a hospital provides nursing care, health instruction, pharmacy, and dentistry in communities where such services are practically unknown.

"With a hospital as a collecting point and with facilities for making such special tests as he may require, a specialist can, on a single visit to a community, give advice and assistance to numerous patients brought to his attention by the local physicians.

* * * *

"Ten States and the District of Columbia have available more than 4 beds per thousand population; 16 States have between 3 and 4 beds; 12 States have between 2 and 3 beds; and finally, 10 States have less than 2 beds per thousand population. Most authorities agree that 4½ beds per thousand population are required to assure the amount of hospitalization necessary for adequate care.

* * * *

"Your committee recognizes that the program proposed under S. 3230 is only a step toward the solution of the health problems which have received its attention for the past several months, and would provide increased hospital facilities only in localities where the need is most desperate. It is felt, however, that this measure should be immediately adopted because of the pressing necessity of the situation, and your committee has designed the measure so it will fit into a more comprehensive program which is being formulated by your committee."

* * * *

An editorial in the *Journal of the American Medical Association* calls attention to the fact that "the definition of the term 'hospital' included in the bill is a synthetic one and raises the question as to whether 'hospitals' constructed under the bill are to enter into the practice of medicine; one does not ordinarily consider a hospital as including 'health, diagnostic or treatment centers, the equipment thereof, and facilities relating thereto.' "

Although the primary purpose of this legislation is to provide hospital facilities "where the need is most desperate," it has been so amended that after the second year grants will be made to "states, counties, health and hospital districts or other political subdivisions of a state," to aid in the cost of "constructing, improving, or enlarging needed hospitals." If this legislation is enacted into law, application can be made from the District for additions to existing hospital facilities as well as new hospital buildings provided, of course, the Surgeon General who must give his approval is convinced of the need. The bill, therefore, has broad implications to the medical profession in Washington.

Reports indicate that the bill stands a good chance for passage in the Senate.

HANDICAPPED CHILDREN'S REGISTER

A recent communication from the District Health Department's Bureau of Maternal and Child Welfare informs the Society that "a register of 'Crippled Children' in the District of Columbia and a quarterly report of children on the Register is required by the Children's Bureau, U. S. Department of Labor, under the Social Security Act, Title V, Part 2. The Health Department plans to call this a 'Handicapped Children's Register.' "

According to the information given the Society, the Register was established "(1) to provide a complete and current record of *all* handicapped children in the District coming within the classifications specified below, regardless of economic circumstances or availability of treatment, (2) to serve as an administrative tool for identifying children about whom inquiries are made and (3) to provide accurate data for community use in planning to meet the needs of handicapped children.

"The names of children (under 21 years of age) handicapped, actually or potentially, by the following conditions are to be included in the Register:

Orthopedic, plastic and neuro-muscular crippling conditions.

Diseases, defects and injuries of the muscles, bones and joints, congenital or acquired, due to local systemic causes, including harelip cleft palate and diseases, defects and injuries of the nervous system affecting muscles, bones and joints and deformities due to burns.

Cardiac and potential cardiac disease.

Cardiac disease, congenital or acquired. Acute rheumatic fever.

Other types of crippling conditions, to include:

Blind and near blind. Seriously defective vision requiring special operative care or special educative provisions.

Deaf and seriously hard of hearing."

The coöperation of physicians, child health clinics, outpatient clinics and hospitals is being sought in connection with the Register. All are requested to fill out forms, which will be provided upon request by the Bureau of Maternal and Child Welfare for each child coming to their attention who falls within the scope of the above classification. The Bureau further requests that in order to keep the Register up-to-date, when a child is dismissed as cured, or has died or moved from the city, or when a significant change in diagnosis or treatment is made, these facts be reported to the Bureau of Maternal and Child Welfare.

DISAPPOINTING OUTCOME*

The failure of the District Medical Society's Mutual Health Service plan is disappointing to everyone genuinely interested in better methods of supplying medical care to low-income groups. In view of the success of Group Hospitalization, Inc., also sponsored by the Medical Society, the outcome of the more recent experiment requires considerable explanation.

Apparently Mutual Health Service had ample coöperation from the medical profession. Approximately 600 physicians had signified their intention of supporting the venture. The rates offered for medical service on a prepayment plan, with patients choosing their own physician, are reported to have been low in comparison with similar rates in other parts of the country. Yet no widespread public demand for the service materialized.

From 26,095 wage earners circularized Mutual Health Service received 2,219 replies. Of this group only 265 claimed to be both eligible to participate and interested in the program. A much larger number—940—were eligible but not interested. If all the applicants had been accepted, the number would have been far too small to permit successful operation of the plan.

For this lack of enthusiasm federal officials in Washington take a large share of the blame. The Department of Agriculture coöperated with the Medical Society in getting information regarding the service before its employes. Many other departments and agencies were not sufficiently interested to reply to appeals for coöperation.

This refusal on the part of many officials to give any support to a plan for prepayment of medical costs within the low-income group will presumably not fall into the category of restraint upon trade. But it will result in postponement of the day when medical costs can be borne by many families of medium and low income without creating a staggering burden. In the meantime, it is to be hoped that the Medical Society will not abandon its plan but await the dawning of a more favorable period for its inauguration.

PERTINENT PARAGRAPHS

April Meetings

The following meetings of the Society, its boards, committees and sections were held during the month of April:

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* Editorial from the *Washington Post*, April 10, 1940.

April 1	Section on Gastroenterology
April 3	Business Meeting of the Society
April 4	Committee on Public Health
April 5	Committee on Industrial Medicine
April 9	Medical Bureau Committee
April 10	Scientific Meeting of the Society
April 11	Grievance Committee
April 13	Committee on Public Policy
April 15	Committee on Public Policy Committee on Automobile Accidents
April 17	Scientific Meeting of the Society Committee on Cancer Control
April 18	Medical Bureau Committee
April 19	Section on Ophthalmology and Otolaryngology
April 22	Executive Board
April 23	Subcommittee on Sports
April 24	Scientific Meeting of the Society Subcommittee on Maternal Welfare
April 25	Subcommittee on Auxiliary Liaison, A.S.A.
April 26	Subcommittee on Sanitation
April 29	Board of Censors

When Shall Meetings Begin?

Several physicians have complained that the Society's Wednesday night meetings begin so early that many practitioners, particularly those not in the downtown area, cannot get to them in time to hear the first papers. Consequently, many do not attend.

To ascertain the views of the majority of members, a canvass is being made of the Society to determine whether meetings should begin at 8:00 or 8:30 p.m. Several who returned the "ballot" sent them, not only "voted" but expressed their views in regard to this matter. One physician who opposed a change said that a discussion of this matter was "nonsensical." Another said, "If meetings are scheduled for 8:30 p.m., they will not get started until 9:00 p.m." However, others were just as emphatic that meetings should begin at a later hour. Comments such as, "Give the poor G. P. a chance!," were made by those who favored the change.

Returns received so far do not warrant action being taken by the Executive Board. Only 78 have voted in favor of meetings beginning at 8:30 p.m. and 54 are opposed. Unless many more manifest an interest in this matter, the time of beginning meetings will undoubtedly remain as it is now.

It is the desire of the officers and committees responsible for the scientific programs not only to hold them at a time when it will be convenient for most practitioners to be there, but to stimulate attendance by every means possible. If a sufficient number will indicate their wishes in this matter, it will receive prompt consideration by the Executive Board.

New Committees Authorized

Newly created committees, authorized by the Medical Society at the Annual Business Meeting on May 1, were as follows: a permanent Obituary Committee, whose duty it shall be to communicate with the family immediately following the death of a Society member and to prepare an obituary for the MEDICAL ANNALS, and a Committee on Relations with the Dental and Pharmaceutical Professions for the purpose of considering problems of mutual interest. Appointments to these committees have not yet been made but will be announced shortly.

District Reorganization Bill

Before this item appears, action will undoubtedly have been taken by the District House Committee on the Reorganization Bill. Although the bill has been amended by the committee, features of this legislation to which the Society has objected have not been eliminated. For example, the bill as it now stands provides for the transfer of the Commission on Licensure to a License Department. It also permits the Commissioners to "request the President of the United States to designate an officer from among the medical officers of the United States Army Medical Corps, the United States Navy Medical Corps, or the United

States Public Health Service Corps, and the President, in his discretion, may designate such an officer who shall, during the time specified by the President, be health officer of the District."

Although the Society's action in opposing these provisions of the bill was reported in the press, the Secretary has informed Congressman Randolph, Chairman of the District House Committee, by letter of the Society's opposition.

Amendment Adopted The following amendment to the Society's Constitution and By-laws was adopted at the Annual Business Meeting on May 1:

AMENDMENT III

Section 1. Chapter VII (A) of the Constitution and By-laws is hereby repealed.

Section 2. There shall be elected at the annual meeting of the Society a Board of three Censors, one of whom shall be elected for a term of three years, one for two years, and one for one year. At each annual meeting thereafter there shall be elected one Censor for a term of three years. Applications for membership shall be promptly delivered to the Board of Censors who shall inquire into the standing of the applicant. The Board of Censors shall notify the Society of the application and shall allow a period of two months within which members of the Society may register their approval or disapproval with the Board of Censors. After the elapse of the said two months, the Board of Censors shall report in writing to the Society, recommending the election of satisfactory applicants.

Membership Requirements In its monthly report to the Medical Society on May 1, the Executive Board stated that complaints had been received regarding the recently adopted amendment relating to requirements for Active membership because physicians to be eligible for this class of membership must be engaged in private practice. The Board gave its assurance that it would investigate this matter further to the end that "no injustice be done any physician licensed to practice in the District of Columbia seeking membership in the Medical Society."

Medical Bureau Because of the time factor, the Medical Bureau Committee found it impossible to complete arrangements for the establishment of the MEDICAL BUREAU, the 24-hour telephone-secretarial service, before the telephone directory went to press on April 24. However, there was widespread interest among physicians in the BUREAU and the Committee decided to continue its work throughout the summer, planning to inaugurate this new agency of the Society with the next telephone directory. Contracts will be sent to all members of the Society and those who are interested are urged to return them promptly.

The BUREAU will not only render valuable service to physicians but to the public as well.

Hobby Show The subcommittee in charge of the Doctors' Hobby Show, which is to be held in connection with the 1940 Annual Scientific Assembly, is endeavoring to interest more physicians who have hobbies. Many have responded but there is still space for more exhibits. Furthermore, the subcommittee is seeking a variety of hobbies and physicians who have unusual ones are especially urged to communicate with Dr. Robert M. Bolton, Chairman of the Subcommittee on Auxiliary Liaison and Hobby Show, or the Secretary of the Society.

At recent meetings of the subcommittee there has been much enthusiasm in regard to this project. Each member has been asked to take charge of the hobbies in which he is particularly interested.

The Hobby Show will be under the supervision of the subcommittee and a committee of the Woman's Auxiliary. The Chairman of the Auxiliary's committee is Mrs. Thomas E. Neill. Mrs. Robert M. Bolton, President, and Mrs. Daniel L. Borden, the incoming President of the Auxiliary, who will take office on July 1, are lending their coöperation.

Scientific and Public Health Exhibits

Within the past few weeks, the Society's membership was circularized by the Subcommittee on Scientific Exhibits for the 1940 ANNUAL SCIENTIFIC ASSEMBLY. The canvass was made for the purpose of securing scientific and public health exhibits. Many have responded and indications are that the exhibits will be the finest ever shown at any Assembly.

Members who have not completed the forms sent them should do so promptly, addressing their communications to Dr. Russell J. Fields, Chairman, Subcommittee on Scientific Exhibits, 1718 M Street, N. W.

Dr. Ruhland Lends Assistance

Through the good offices of Dr. George C. Ruhland, District Health Officer and Secretary of the Commission on Licensure, the Society has received a complete list of all doctors of medicine licensed to practice in the District of Columbia. The list, which was prepared under the supervision of Mr. Paul Foley, Dr. Ruhland's assistant, will prove very valuable to the newly created Membership Committee which proposes to determine how many physicians in the District are engaged in private practice, are employed full-time by the local or federal government, are nonresident, and have retired.

Annual Reports Available to Members

Members of the Society who attended the Annual Business Meeting were each given a copy of a 44-page review of the activities of the Medical Society for the year 1939-1940. Included were the President's Message to the Society, the Annual Reports of the Chairman of the Executive Board and the Secretary. In addition, activities of all boards, committees and sections were summarized. Current reports of the Board of Censors and the Executive Board were also included.

No physician is in a position to evaluate the accomplishments of his Society unless he takes the time to inform himself. A copy of these reports can be obtained by calling the Society's office.

PROCEEDINGS OF THE ANNUAL BUSINESS MEETING

The Annual Business Meeting of the Medical Society was held in the Society's auditorium on the evening of May 1. About three hundred members were present.

Preceding the annual reports, the President addressed the Society briefly. He said in part:

> "The Society can look upon the last year with satisfaction. The administrative machinery which was introduced two years ago has continued to function efficiently and a great deal has been accomplished. . . .
>
> "I am proud to report that the membership of the Society is now at the highest peak in its history. Despite this and the fact that the scientific programs have been excellent, the attendance at the meetings has not been good. This may be due to the large number of smaller medical societies. I believe that the Society should take cognizance of this situation and endeavor to find a remedy. It may be that reducing the number of business meetings is a step in this direction. . . ."

Annual Report of the Chairman of the Executive Board

The Chairman called attention to the provisions of the Constitution and By-laws relating to the Executive Board, commenting upon the efficiency of the Board since its reorganization. He said that it had faithfully complied with the requirements of the Constitution and By-laws, pointing out that the Society had been kept informed at monthly intervals of the Board's activities and that all matters of policy had been referred to the Society for its action.

Members were urged to read the Summary Report of Activities for 1939–1940, a copy of which was provided each member of the Society present. This report reviewed the activities of all boards, committees and sections.

There followed a rather detailed discussion of the legal status of the Society, in which the cooperation and support given by the membership was highly praised. Health legislation and the Society's experience with Mutual Health Service were also commented upon.

Annual Report of the Secretary

The Secretary submitted the following figures showing the steady growth of membership in the Society:

	1937	*1938*	*1939*	*1940*
Active	740	789	820	848
Life	51	52	55	51
Associate	127	149	164	190
Honorary	7	7	7	7
Total	925	997	1046	1096

The Secretary reported that he had attended 152 meetings, including those of the Society, its boards and committees during the year 1939–40. In addition, he had numerous conferences with the press, legal counsel and lay individuals relative to Society matters.

Assistance, he stated, had been given by him to the Committee on Postgraduate Education in connection with its Postgraduate Course in Syphilology and to the Committee on Arrangements for the 1940 Annual Scientific Assembly, whose plans are now under way.

The manner in which the classified list of physicians was being used at the Society's office was explained. Numerous calls, it was reported, were being received from the public for names of physicians.

Commenting upon the Society's public health activities and the legal proceedings involving the Society, the Secretary stated he had devoted much of his time to them.

The Secretary referred to his first appearance before a Congressional committee in connection with the so-called Podiatry Bill. He said he had provided the Committee on Public Policy with information in regard to pending legislation relating directly or indirectly to medicine.

All statements in connection with the Society's activities released to the press, it was reported, were approved by the Committee on Public Relations. The Secretary, however, assisted in preparing news releases and held conferences with reporters.

Although most of the work in connection with the radio programs is done by the Chairman of the Committee on Radio Education, to whom much credit, it was stated, is due for the excellence of the Society's broadcasts, the Secretary had also assisted him and his Committee on two occasions broadcasting over Station WMAL.

Much of the Secretary's time had been devoted to Mutual Health Service, of which he was chosen Acting Administrator when Mr. Hugh Buhrman, Administrator, was granted an indefinite leave of absence. He stated that as Secretary of the Board of Trustees of the Service, he had attended 22 meetings. Aside from the ordinary secretarial duties, he had been called upon to devote a considerable amount of his time to this project.

Details in connection with the participation of members of the Medical Society in Group Hospitalization, Inc., the Secretary reported, were handled in the Society's office. At the present time there are 295 subscribers.

As Managing Editor of the Medical Annals, the Secretary rendered assistance to the Editor, to whom all material appearing in the Annals is submitted for approval, and to the Associate Editors who contribute to it from time to time. Advertising in the Medical Annals had increased 25 per cent, it was reported. Whether or not this increase can be maintained or improved upon, the Secretary stated, was dependent upon the effort put forth by Society members to inform advertisers of their appreciation of the support given the Society's publication.

Following current reports by the Board of Censors and the Executive Board, tribute was paid to the late Dr. Thomas A. Groover, former President of the Medical Society, by Dr. Harry A. Fowler and Dr. Charles Stanley White.

Election of Officers

Before the election of officers, the Secretary read a communication from Dr. J. Russell Verbrycke withdrawing his name as a candidate for the office of President-elect, which left two nominees, Dr. Coursen B. Conklin and Dr. Henry R. Schreiber. Nominees for other offices were unopposed. As a result of the balloting, the following were elected for 1940–1941:

Dr. Henry R. Schreiber, *President-elect*
Dr. R. Lomax Wells, *First Vice President*
Dr. Elizabeth Chickering, *Second Vice President*
Dr. Raymond T. Holden, *Member of the Executive Board (4-year term)*
Dr. Thomas Thompson, *Member of Board of Censors (3-year term)*

The meeting closed with the election of applicants for membership.

REGULATIONS OF THE MINIMUM WAGE BOARD PERTAINING TO PHYSICIAN'S OFFICE HELP

Under the regulations of the District of Columbia Minimum Wage Board, physician's female and minor male office help has been classified. These regulations provide that where only one person is retained in the doctor's office, she or he must be paid a minimum wage of $17.00 per week. The fact that she or he is also receiving training or instruction in technician and quasi-nursing work is immaterial. If more than one person is employed in the doctor's office receiving wages of $17.00 per week, then one other person can be paid what is termed a learner's wage of $14.00, provided a license is obtained from the Minimum Wage Board permitting that person, classified as a learner, to work at a learner's wage. Licenses for learners can be obtained without expense from the Minimum Wage Board.

Applicable portions of Order No. 7 of the District of Columbia Minimum Wage Board, effective March 13, 1939, enacted pursuant to an Act of Congress approved September 19, 1918 (40 Stat. 960) are as follows:

1. Workers Included. The workers covered by this order shall include all women and minors engaged in office and previously unclassified occupations (manufacturing and wholesaling excluded).

2. Wages. No person, firm, association or corporation shall employ any of the following workers in office and previously unclassified occupations at less than the wages specified, which wages are found to be required "to supply the necessary cost of living to such workers to maintain them in good health and to protect their morals":

(a) Stenographers, bookkeepers, typists, clerks, cashiers, checkers, professional's assistants and attendants, laboratory mechanics and technicians, messengers, ushers, telegraph and telephone operators, and all similar workers.

(a) For each standard work week of 30 to 44 hours per week not less than $17.00 per week. If employed for less than 30 hours per week or more than 44 hours per week, not less than 50 cents per hour for each undertime or overtime work.

3. Learner's License for Adult, Female and Male Minor Learners.

(a) No woman or minor, a female or male person under 18 years of age, may be employed at less than the above wages unless such woman, or female or male minor has secured from the

Minimum Wage Board a learner's license which must have been applied for in person by said learner on or before the date of the beginning of employment.

(b) An adult learner is a woman not less than 18 years of age who is employed as a worker under Section 2 (a) of this order and who has been employed in such occupation for less than six months and for whom a learner's license has been issued.

(c) No adult learner shall receive a wage less than $14.00 for each standard work week of 30 to 44 hours during her first six months of employment. Thereafter, she shall receive not less than $17.00 for each standard work week of 30 to 44 hours. If she is employed for less than 30 hours per week or more than 44 hours per week, she shall receive not less than 50 cents for each undertime or overtime hour.

(d) Not more than 10 per cent of the total number of women employed full-time in any establishment may be classified as adult learners; except that in establishments employing from two to ten women full-time, one adult shall be permitted in each such establishment.

(e) A minor learner is a female or male person under 18 years of age employed in the office or previously unclassified occupations and for whom a learner's license has been issued.

(f) No female or male minor shall receive a wage less than $14.00 for each standard work week of 30 to 44 hours during such person's first twelve months of employment; thereafter not less than $17.00 for each standard week, it being the Board's finding that payment of less than such minimum wage to minors is unreasonably low; provided, however, when any female minor learner shall reach the age of 18 she shall be classified as an adult learner or an experienced worker, as the case may be, the employment in the occupation as a minor to be computed upon the same basis as employment for an experienced worker or adult learner. No minor learner shall receive wages less than 35 cents per undertime or overtime hour if employed in any week for less than 30 hours per week or more than 44 hours per week.

(g) Any period of employment of a learner shall be deemed a part of such learner's experience in the office or previously unclassified occupations whether such period of employment is continuous or occurs in more than one establishment or under more than one employer. All women or minors, female or male, employed in the office or previously unclassified occupations at the time this order becomes effective shall be classified and paid in accordance with their respective period of employment at wages not less than those specified for their respective classifications in this Order.

If a minor has had twelve months' experience, upon reaching her 18th birthday, she shall be paid not less than the experienced woman worker's rate of $17.00 per week for each standard work week and if she has had four months' experience upon reaching her 18th birthday, she may be employed for two additional months at the learner's wages and thereafter not less than $17.00 per week.

Penalties for Violation: Section 18. Whoever violates this act, whether an employer or his agent, or the director, officer or agent of any corporation, shall be deemed guilty of a misdemeanor and, upon conviction thereof, shall be punished by a fine of not less than $25.00 nor more than $100.00, or by imprisonment not less than 10 days nor more than three months, or by both such fine and imprisonment.

Inquiries regarding this Order may be made to the Secretary of the Society or the Minimum Wage Board, 515 D Street, N. W., Washington, D. C.

ARMY EXPERIENCE FOR PHYSICIANS

An interesting medical corollary to the augmentation of the United States Army during 1940 and 1941 and to the planned large scale Army maneuvers during the spring and summer of 1940 is the broad medico-military experience which a great number of civilian physicians will receive. Medical Reserve officers are being used to augment the entire Army Medical Service, which includes everything from small unit installations to large Station Hospitals, General Hospitals, and hospitals designed primarily for the treatment of specific types of cases.

Physicians under 35 years of age who are desirous of obtaining extended active duty with the Army but who do not hold Reserve commissions are being offered appointments in the Medical Corps Reserve in the grade of 1st Lieutenant, in order to permit them to be placed on such duty. Captains and Lieutenants are at present being offered excellent assignments throughout the continental United States, and it is hoped that authority will be granted to actually permit some officers to go to Hawaii and Panama. In addition to having a new and very busy experience in the practice of medicine, the average officer finds the pay and allowances attractive. The pay and allowances for a married 1st Lieutenant amount to approximately $263.00 a month; for a single 1st Lieutenant to approximately $225.00 a month; for a married Captain to approximately $316.00 a month; and for a single Captain to approximately $278.00 a month. In most cases the above pay and allowances would apply inasmuch as Government quarters are not usually available for officers on extended active duty. In the few instances where Government quarters are available, the amounts would be $40, $60, $60, and $80 less per month, respectively. In addition, the officer is reimbursed for mileage traveled from his home to his station, and upon completion of his tour of duty is reimbursed similarly for the travel to his home.

Application for one year of active duty, or for appointment in the Medical Corps Reserve with a view to obtaining one year of active duty with the Army, should be requested at once by a letter addressed to the Commanding General of the Corps Area* wherein the physician permanently resides. In addition, the application should contain concise information regarding permanent address, temporary address, number of dependents, earliest date available for active duty, and that internship has been (or will be) completed; and it should be accompanied by a report of physical examination recorded on the Army Form W.D. A.G.O. 63, which may be obtained from any Army station. From the group of Reserve officers placed on extended active duty since August 1939, over 25% of those within the age requirements of 32 years of age or less for commission in the Regular Army Medical Corps found military service sufficiently to their liking to cause them to take entrance examinations for the Regular Army.

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* Third Corps Area (Pa., Md., Va., D. C.) Post Office & Court House, Baltimore, Md.

MEMBERSHIP

The following applicants were duly elected to membership at the business meeting, May 1, 1940:

Active Members

Frank Thomas Cawley, 294 Oglethorpe Street, N. W.
Robert Battey Crichton, 1613 Harvard Street, N. W.
Zigmond Meyer Lebensohn, 1028 Connecticut Avenue, N. W.
John F. O'Brien, 3060 Grant Road, N. W.
Henry L. Peckham, Jr., 1029 Vermont Avenue, N. W.
Samuel Zola, 406 First Street, S. E.

Associate Members

George Martin Leiby, 1742 Rhodes Street, Arlington, Va.

The following applicants for membership will be voted on at the first fall meeting:

For Active Membership

Lee William DeFault, Georgetown University—1935
John Henry Hazard, George Washington University—1938
Louis Samuel London, Long Island College of Medicine—1908
Ernest Michaelson, University of Maryland—1938

For Associate Membership

William David Chase, George Washington University—1936
Lawrence Bernard McCaleb, Georgetown University—1934
Dallas Haven McCarter
Margaret Isabel Reith, College of Medical Evangelists—1935
Ernest Clay Shull, Medical College of Virginia—1924
John McCullen Warren, University of Maryland—1935

NEWS AND PERSONALS

The Fifth Annual Extension Course and Reunion of the Georgetown University Medical Alumni will take place on June 7 and 8. Under the joint chairmanship of Doctors Leon A. Martel and Ralph M. LeComte the program committee has arranged a program which includes the following presentations:

- "The Relationship of Nutritional Deficiency to the Clinical Course of Cardiovascular Disease," William B. Porter, M.D., Professor of Medicine, Medical College of Virginia.
- "Arterial Hypertension from the Urological Standpoint," Lloyd Griffith Lewis, M.D., Urologist-in-charge, Brady Urological Institute, Johns Hopkins University.
- "Skin Eruptions of the Newborn," William F. O'Donnell, M.D.
- "Common Skin Diseases and Their Office Treatment" (illustrated in color by slides from the collection of Robert Stolar, M.D., '35), Frank J. Eichenlaub, M.D.
- "Abdominal Pregnancies with Successful Termination" (illustrated with X-ray films), William J. Cusack, M.D., and Fred O. Coe, M.D.
- "Differentiation between and Interrelationship of

the Organic, the Functional and Malingering in Neuro-Psychiatry," Antoine Schneider, M.D.

"Infections of the Hand," Philip A. Caulfield, M.D.

This program will be supplemented with a series of operative and other clinics to be conducted at Georgetown University and Children's Hospitals. A new feature of this year's presentation will be a scientific exhibit which will be shown and explained in the Library of the School of Medicine. The exhibit and demonstrations are being prepared by the Departments of Radiology, Medicine, Anatomy, Physiological Chemistry, Physiology, Pathology, Pharmacology and Bacteriology. The staffs of these departments will endeavor to portray, through these exhibits, what is currently being done in their respective fields of scientific research.

Members of the Medical Society of the District of Columbia are cordially invited to attend this course.

The National Gastroenterological Association announces that its Fifth Annual Convention will be held June 4, 5 and 6, 1940, with headquarters at Hotel Roosevelt, New York. Dr. Henry A. Monat of Washington, recently elected a Fellow of the Association, will appear on the program.

The Osler Memorial Building will be dedicated on the grounds of the Philadelphia General Hospital at Curie Avenue, near 34th and Pine Streets, Philadelphia, at 2:00 p.m. on June 8, 1940. An invitation is extended to those who are interested, and especially to those who are planning to attend the American Medical Association Convention in New York City, June 10 to 14.

The old autopsy house where Osler worked at Blockley, which will be known as the Osler Memorial, contains the original furnishings including the necropsy table. The painting, "Osler at Old Blockley" by Dean Cornwell, A.N.A., of New York, will be on exhibition during the celebration. The Committee would welcome any additions to the collection of relics of Old Blockley as well as Osleriana.

The Department of Obstetrics and Gynecology of the University of Chicago and the Chicago Lying-in Hospital, in coöperation with state and federal health agencies, are offering five to six weeks **Postgraduate Courses in Obstetrics** for practitioners during the next several months. The first three periods are set for April 29 to June 8; June 17 to July 20; and July 22 to August 24, 1940. Interested physicians may address their letters of inquiry to the Postgraduate Course, Department of Obstetrics and Gynecology, 5848 Drexel Avenue, Chicago.

The Wilhelmina C. Hartmann Memorial Wing of the Washington Home for Incurables, 3720 Upton Street, N.W., was formally opened on April 16 at 4:00 p.m. The wing, along with a new heating plant and changes in the auditorium, was built at a cost of $200,000, the funds for which were the bequest of Mrs. Abram Lisner in memory of her sister. The new addition will house 33 more patients, bringing the total capacity of the Home to approximately 187 patients. The bequest will make possible the opening of a school for practical nurses, who will be especially trained for the care of chronic invalids and convalescents.

Mrs. Franklin D. Roosevelt took part in the dedicatory exercises, and Dr. Warfield T. Longcope, Physician-in-Chief of Johns Hopkins Hospital, gave the dedicatory address.

Dr. Linn F. Cooper is medical director of the the institution, Dr. Walter K. Myers, laboratory director, and Dr. Austin B. Chinn, medical adviser to the nurses school. In addition to Drs. Chinn and Myers, Dr. Theodore J. Abernethy and Dr. R. Lomax Wells will have charge of the medical service for a three-month period each.

A testimonial dinner in honor of the **Instructive Visiting Nurse Society** was held at the Mayflower Hotel, Tuesday evening, April 30. The dinner was sponsored by the Washington Council of Social Agencies, the Washington Board of Trade, and the Medical Society of the District of Columbia, in celebration of 40 years of service given by the Instructive Visiting Nurse Society. Attorney General Robert H. Jackson was toastmaster. An anniversary message from President Roosevelt was read. Mrs. Franklin D. Roosevelt presented a testimonial to the Society which was accepted by its president, Mrs. Harlan Fiske Stone. The principal address was given by Mrs. Chester C. Bolton, Representative from Ohio. A number of speakers appeared on the program, among them Dr. John H. Lyons, President of the Medical Society.

May 1 was proclaimed **Child Health Day** by President Roosevelt. The President invited "all agencies and organizations interested in child welfare to unite upon that day in the observance of such exercises as will awaken the people of the Nation to the fundamental necessity of a year-round program for the protection and development of the health of the Nation's children."

In connection with the national observance of Child Health Day, the Washington Council of Social Agencies held a luncheon meeting on April 29, at which time representatives of various health organizations spoke. The Medical Society was represented by President John H. Lyons. Other speakers were Dr. Ella Oppenheimer and Dr. P. A. McLendon.

The Society's **Speakers' Bureau** supplied speakers to various organizations in the District in the past month. The following talks were given:

April 2, 1940
Cooley-McCullough American Legion Auxiliary
"Immunization Against Diphtheria," Dr. Charles B. Campbell

April 6, 1940 Federation of Citizens' Associations
"Cancer—Its Prevention and Control," Dr. Philip A. Caulfield

April 9, 1940 Parent-Teachers Association, Gage School
"It May Be Catching" (Communicable Diseases), Dr. D. L. Weinstein

April 9, 1940 Parent-Teachers Association, West School
"Emotional Problems of Childhood," Dr. Paul J. Ewerhardt

April 15, 1940 Lincoln Park Citizens' Association
"Cancer—Its Prevention and Control," Dr. George Tolstoi

April 15, 1940
Parent-Teachers Association, Whittier School
"How Can We Tell Them?" (Sex Education), Dr. Herbert P. Ramsey

April 16, 1940
Graduate and Undergraduate Nurses at Gallinger
"Cancer—Its Prevention and Control," Dr. Eugene R. Whitmore

April 19, 1940 American Legion Auxiliary
"Prevention of Tuberculosis in Children," Dr. E. Raymond Fenton

April 19, 1940 District Public School Association
"Cancer—Its Prevention and Control," Dr. J. Rogers Young

April 22, 1940 Bible Class, Emory Methodist Church
"Cancer—Its Prevention and Control," Dr. Truman Abbe

April 23, 1940 Central High School Students
"Medicine" (Vocational Guidance), Dr. A. Fife Heath

May 2, 1940 Roosevelt High School Students
"Medicine" (Vocational Guidance), Dr. James A. Gannon

May 2, 1940 Home Hygiene Class, American Red Cross
"Cancer—Its Prevention and Control," Dr. Joseph F. Elward

The Section on Neurology and Psychiatry met May 2, at which time Dr. Antoine Schneider gave the Chairman's Address on the subject, "Differentiation between and Interrelationship of the Organic, the Functional and Malingering in Neuro-Psychiatry."

The following officers for the ensuing year were elected at this meeting:

Dr. Paul Ewerhardt, *Chairman;* Dr. Philip Litvin, *Vice Chairman;* Dr. Isadore Rodis, *Secretary-Treasurer.*

The Section on Gastroenterology held a special meeting May 13. Two motion picture films of particular interest to its members were shown: "Clinical Interpretation of Electrocardiograms," Dr. George C. Griffith, Philadelphia; "Pathologic Blood Cells," Dr. Warren H. Lewis, Carnegie Institute—Johns Hopkins.

The following officers have been elected for 1940-41:

Dr. R. Lyman Sexton, *Chairman;* Dr. Alan F. Kreglow, *Vice Chairman;* Dr. Robert Sterling McGrath, *Secretary-Treasurer.*

The Section on Ophthalmology and Otolaryngology elected officers for the ensuing year as follows:

Dr. Edward J. Cummings, *Chairman;* Dr. Elmer Shepherd, *Vice Chairman;* Dr. P. S. Constantinople, *Secretary;* Dr. John Trinder, *Treasurer.*

The Woman's Auxiliary to the American Medical Association will hold its 18th annual convention in New York City June 10 to 14, 1940 with headquarters at the Hotel Pennsylvania. In view of the fact that the second edition of the World's

Fair will accelerate advance hotel reservations, it is urged that reservations be made immediately through the Housing Bureau which has been set up by the American Medical Association, namely, Dr. Peter Irving, Room 1036, 233 Broadway, New York City.

The Washington Academy of Surgery held a meeting April 12, 1940. The following program was presented: "Embolism of the Arteries of the Extremities," Dr. Harry H. Kerr; "Intestinal Obstruction due to Gallstones," Dr. James A. Cahill, Jr.

At this meeting the following officers were elected for 1940–41:

Dr. William B. Marbury, *President;* Dr. Edmund Horgan, *Vice President;* Dr. Crenshaw D. Briggs, *Secretary-Treasurer.*

The Five-State Postgraduate Clinic sponsored by the **District of Columbia Dental Society** will be held May 19–23, 1940. Several members of the Society will participate in the program. Dr. Robert E. Moran will speak on "Plastic Surgery Procedures about the Jaws and Mouth" on May 20. Dr. F. A. Martinez will conduct a table clinic on May 23. His subject will be "Dissections of the Head and Neck." On the same day, Dr. Eugene R. Whitmore will conduct a clinic on "Radiation and Skin Cancer."

The Subcommittee on Child Welfare presented a motion picture entitled, "When Bobby Goes to School," in the auditorium of the Medical Society Building April 24 before the regular meeting of the Society. The film, which is to be shown to lay audiences, is sponsored by Mead Johnson and Company.

The Woman's Clinic of Washington celebrated its 50th anniversary on April 11 at the Roosevelt Hotel. The Clinic was founded in 1890 in what was then called "The Cottage Home" at 1237 T Street, N.W. Dr. Ida J. Heiberger, one of the founders, was actively associated with the work for 30 years. Dr. Lauretta E. Kress, formerly an Associate member of the Society, was superintendent for twenty years.

The George Washington University Medical Society heard an address by Dr. Eugene F. Traub of New York, Professor of Dermatology, University of Vermont, on Saturday evening, April 20. His subject was "The Diagnosis and Essentials in Treatment of Common Skin Disorders."

Dr. Arnold McNitt, President of the Society, entertained in honor of Dr. Traub at dinner at the Mayflower Hotel previous to the meeting.

Training for the **1940 Citizens' Military Training Camps** will begin July 5 and conclude August 3. The District quota is 206. A number of Society members have volunteered to conduct the physical examinations and to give inoculations free of charge to all applicants for the training. These physicians are Drs. Robert A. Bier, John R. Cavanagh, Morris Chase, Abe. M. Cohen, Watson W. Eldridge, Vincent J. Dardinski, Harry S. Douglas, Theodore C. C. Fong, Elmer W. Fugitt, Augustus C. Gray, Eugene W. Higgins, Clayton H. Hixson, Richard L. Jackson, Robert S. Jacobs, Joseph R. Jordan, Howard Katzman, Edward A. Krause, Arthur H. Lewis, Benjamin Manchester, Raymond Maret, George V. Martin, Jr., William S. Miller, Harry B. Orleans, Philip A. E. Stebbing, George Tolstoi, Maurice van Kinsbergen and Paul R. Wilner.

The senior class of the **George Washington University School of Medicine** has pledged $10,000 as an endowment for the school. Each of the fifty members of the class signed a non-interest bearing note for $200 payable within twenty years of graduation. The class expressed the hope that this precedent would be followed by succeeding classes.

Doctors' Hospital has been added to the list of hospitals giving service to participants of Group Hospitalization, Inc. This brings the number of participating hospitals to twelve. They are: Central Dispensary and Emergency Hospital, Children's Hospital, Columbia Hospital for Women, Doctors' Hospital, Eastern Dispensary and Casualty Hospital, Episcopal Eye, Ear and Throat Hospital, Garfield Memorial Hospital, George Washington University Hospital, Georgetown University Hospital, National Homeopathic Hospital, Providence Hospital and Sibley Memorial Hospital.

Georgetown University Hospital was presented with a humidicrib by the Ladies' Auxiliary Board of the Hospital. It will be used in the care of premature infants.

Children's Hospital was the recipient of $6,540 for its blood and serum bank during the past few weeks. The campaign for funds was sponsored by the American Contract Bridge League, Station WJSV of the Columbia Broadcasting System and the Washington Post. Coöperating with them were American Legion Posts and auxiliaries, honor societies, schools, parent-teacher associations, business, civic, women's, social and other types of organizations as well as individuals.

At the last meeting of the **Pan-American Medical Association,** the Board of Directors adopted a resolution making the President and President-elect of the Medical Society of the District of Columbia honorary members of the Association during their tenure of office. At the expiration of his term of office, the Past President may become an Active member of the Association. Dr. John H. Lyons and Dr. Daniel L. Borden have accepted the memberships.

Dr. Temple S. Fay, Professor of Neurology and Neurosurgery of Temple University School of Medicine, Philadelphia, addressed the first annual meeting of the George Washington Undergraduate Medical Societies on April 13. His subject was, "Refrigeration Treatment of Malignant Disease."

Prior to the lecture, Dr. Fay was entertained at a luncheon given in his honor by Dr. Walter Freeman at the Cosmos Club.

Dr. William P. Herbst gave a paper on "The Treatment of Renal Tuberculosis" before the Genitourinary Section of the New York Academy of Medicine on April 17.

Dr. Sanford M. Rosenthal addressed the Chemical Society of Washington, April 11, on the subject, "Experimental Studies upon Sulfanilamide and Related Compounds."

Mr. Frederick A. Fenning, Honorary member and Advisory Counsel of the Medical Society, has been elected to Honorary membership in the Medical Society of St. Elizabeths Hospital. At the annual dinner which was held recently, Mr. Fenning read a paper entitled, "The Fulfilment of Dr. White's Purpose."

Dr. Darrell C. Crain was elected to Associateship in the American College of Physicians at its recent meeting in Cleveland.

Dr. Howard F. Kane participated in the 142nd Annual Meeting of the Medical and Chirurgical Faculty of the State of Maryland. On April 24 he spoke before the Section on Obstetrics and Gynecology on the subject of "Prenatal Care."

Drs. Henry L. Darner and Roger O'Donnell, Jr., were elected new members of the Mothers' Health Association Medical Advisory Board at the association's third annual meeting on April 2.

Dr. Thomas Parran began his second four-year term as Surgeon General of the United States Public Health Service on April 6.

CORRESPONDENCE

Baltimore, Md.
May 3, 1940.

Dr. Wallace M. Yater, Editor,
Medical Annals of the District of Columbia,
Washington, D. C.

Dear Doctor Yater:

In my article on "The Diagnosis and Treatment of Laryngeal Tuberculosis," published in the Medical Annals of the District of Columbia, it has come to my attention that I unintentionally failed to mention the fact that Doctor Leo V. Schneider had helped me prepare an article on the subject several years ago, while he was an assistant to Doctor Cullen at the Maryland State Sanatorium, which we published together in the Journal of the A.M.A., October 6, 1928.

When I read my paper to the Otolaryngologists before the Nose and Throat Section in Washington, naturally much of the data and tables used in our experience was given and I did not have any idea that the paper would be desired for later publication. However, when a request was made for it, it was sent in with the omission of the proper reference, for which I am extremely sorry.

Sincerely yours,

(Signed) Edward A. Looper, M.D.

THOMAS ALLEN GROOVER, M.D., D.Sc., F.A.C.P., F.A.C.R.

(1877–1940)

Dr. Thomas Allen Groover, nationally known radiologist and a Life Member of the Medical Society of the District of Columbia, died April 20, 1940 in his apartment at the Wardman Park Hotel. Dr. Groover was a pioneer in the field of roentgenology, having begun his studies at the old Emergency Hospital forty years ago, five years after the discovery of X-rays by Roentgen. Exposure to X-rays early in his career caused his death.

Dr. Groover was born in Brooks County, Georgia, May 9, 1877, the son of Thomas Alfred and Sarah Jane Groover. He was educated in the public schools of Georgia and came to Washington in 1893. He studied medicine at Columbian University, now George Washington University, and received his degree in medicine in 1898. Following graduation, Dr. Groover served a year of internship at Garfield Hospital, then for a year he was physician with the Isthmian Canal Commission in Nicaragua. He returned to Washington in 1900 and the same year became a member of the staff at Emergency Hospital. In 1903 he was associated with Dr. James Dudley Morgan. The following year he became medical inspector of the District schools, serving in this capacity for seven years. In 1916 he formed a partnership with Dr. Arthur C. Christie and two years later they were joined by Dr. E. A. Merritt with offices at 1835 Eye Street, N. W. In 1926, George Washington University conferred upon him the honorary degree of Doctor of Science in recognition of his achievements.

Dr. Groover became a member of the Medical Association of the District of Columbia in 1899 and of the Medical Society in 1902. He was President of the Society in 1925 and was active on committees for many years. He was a charter member and Past President of the American Roentgenological Society, Past President of the American Roentgen Ray Society, Past President of the American College of Radiology and Past Vice President of the Southern Medical Association. He was also a Fellow of the American Medical Association and of the American College of Physicians. He held membership in the Radiological Society of North America and was a diplomate of the American Board of Radiology. He was also a former President of the District Lions Club and held membership in the National Press Club and Board of Trade.

In 1928 he married Ila May Boddie of Pittsburgh, Pennsylvania, who survives him together with a brother, E. F. Groover, of Pidcock, Georgia, and a sister, Mrs. William M. Blitch of Cairo, Georgia.

LEWIS HARVIE TAYLOR, M.D., M.S.

(1875–1940)

Dr. Lewis Harvie Taylor, surgeon and President of Sibley Memorial Hospital, died May 30, 1940 at his farm in Chula, Amelia County, Virginia, which was also his birthplace. He was born July 26, 1875, the son of Armistead Green and Pattie Hardaway Taylor, and was the fourth physician in his family.

Dr. Taylor attended Western High School in the District of Columbia and received his degree in medicine from Columbian University, now George Washington University, in 1903. He served his year's internship at the Government's Hospital for Insane. From 1904 to 1907 he was resident physician at George Washington University Hospital and its attending surgeon from 1907 to 1910. He was assistant professor of surgery at George Washington School of Medicine from 1906 to 1910. During the years 1916 to 1920 he was attending surgeon at Casualty Hospital. From 1921 until his death he was consulting surgeon at St. Elizabeths Hospital, retaining that position after his appointment as President of Sibley Memorial Hospital in 1926. During the World War he was a Lieutenant in the Medical Corps. Only a year ago, George Washington University conferred upon him the honorary degree of Master of Science.

Dr. Taylor became a member of the Medical Association of the District of Columbia in 1905, and a member of the Medical Society the same year. He was a Fellow of the American Medical Association and a past President of the American Therapeutic Society. He also held membership in the Virginia Medical Society, the Washington Medical and Surgical Society, and the Association of Hospital Superintendents. He was a member of the House of Delegates of the Hospital Association and a Fellow of the American College of Hospital Administrators. He was a frequent contributor to

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medical journals and was the author of numerous books and papers on surgery.

Dr. Taylor held membership in numerous social organizations. He was Past President of the University Club and a member of the Cosmos Club, the Racquet Club, the National Press Club, the Westmoreland Club in Richmond, the Elks Club, National League of Masonic Clubs, Almas Temple Shrine, and the American Legion.

Dr. Taylor was associated with Dr. Adam Kemble, with whom he shared an office at the Cecil Apartments, 15th and L Streets, N. W. He was formerly associated with the late Dr. William Allen White. Dr. Taylor never married. A brother, William B. Taylor of Chula, Virginia, is the only surviving relative.

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ARTHUR CAMP STANLEY, M.D., F.A.C.S.

(1883-1940)

Dr. Arthur Camp Stanley, an Active Member of the Medical Society, died April 30, 1940 at his home, 2370 Massachusetts Avenue, following a brief illness. Dr. Stanley was born in Milwaukee, Wisconsin, October 18, 1883, the son of Captain William Stillman Stanley and Louise Norton Camp Stanley. He studied at Yale and was graduated from George Washington University School of Medicine in 1906. Later he studied in Berlin and Austria. Early in his career, Dr. Stanley became a member of the Medical Corps of the United States Navy and returned from service in the World War with the rank of Lieutenant Commander. He resigned to take up private practice.

Dr. Stanley became a member of the Medical Society in 1913. He was a Fellow of the American Medical Association, a Fellow of the American College of Surgeons, and a member of the George Washington University Medical Society. He was long active in Boy Scout work and had received from the National Scout Organization its highest award, the Silver Beaver, for outstanding service. In addition to being Scout Commissioner for the District of Columbia, he was a member of the Executive Council of Region 3, comprising Washington and nearby states. He was a member of the Sons of the American Revolution, a member and former governor of the Society of Colonial Wars, and at the time of his death, a deputy governor. He also held membership in the Chevy Chase Club, the Army and Navy Club, the Cosmos Club and the Alfalfa Club.

In 1912, Dr. Stanley married Miss Alice Willard Boyd, daughter of the late John C. Boyd, U.S.N., and Mrs. Kate Willard Boyd. He is survived by his wife and four children, John, Arthur Camp, Jr., Caleb and Katherine; two sisters, Mrs. Edward Beck and Mrs. Stanley Huntington, and a brother, Dr. William S. Stanley of Milwaukee. He was buried in Arlington National Cemetery.

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LYMAN JARIUS CLEMENTS, M.D.

(1865-1940)

Dr. Lyman Jarius Clements, an Active Member of the Medical Society of the District of Columbia, died April 12, 1940 at his home, 512 B Street, N. E.

Dr. Clements was born August 4, 1865 in Vicksburg, Mississippi. He began his career as a newspaperman, and in 1890 came to Washington to accept a position with the Government Printing Office. He then began the study of medicine at George Washington University and received the degree in medicine in 1906. Dr. Clements had practised medicine in Washington for the past 34 years.

Dr. Clements became a member of the Medical Society in 1922. He was a Fellow of the American Medical Association and retained his membership in the Columbia Typographical Union until his death.

Eight children survive, Mrs. Ivy Ashburn, Mrs. Myrtle MacAboy, Mrs. Lucile Boswell, Lyman P. Clements, Dr. William H. Clements and Samuel B. Clements, all of Washington, Sister Maria Anthony of Goldsboro, N. C., and Mrs. Julia Golden of San Francisco, California.

HENRY CLARKE COE, M.D., F.A.C.S.

(1865-1940)

Dr. Henry Clarke Coe, gynecologist and one of the organizers of the Medical Reserve Corps of the Army, died April 21, 1940 following a long illness, at his home at Clifton Terrace Apartments.

Dr. Coe was born in Cincinnati, Ohio, February 21, 1856, the son of Erastus Pease and Mary Ross Coe. He graduated from Yale University in 1878 and received the degree in medicine from Harvard in 1881. The following year he attended the College of Physicians and Surgeons at Columbia University.

Later he went abroad for postgraduate study. In London he received the degree of Licentiate of the Royal College of Physicians, and in 1884 became a member, and later a Fellow, of the Royal College of Surgeons. After additional study in Vienna, Leipzig and Edinburgh, he returned to the United States in 1886 and began his practice of surgery in New York City, where he became one of the foremost obstetricians and gynecologists of his day. Dr. Coe was the author of "Clinical Gynecology," numerous monographs and scientific papers, and was a member of the staff of several medical publications. He also contributed articles and stories to literary magazines.

In 1914 Dr. Coe assisted General Leonard Wood to organize a trained reserve of medical men to supplement the Army's regular Medical Corps in time of war. He accepted a commission in the newly organized Medical Reserve Corps and in 1917 was advanced to the rank of Major. He was sent to England with an early contingent of the American Expeditionary Forces and in France was second in command of the first base hospital for American troops. After the Armistice he was promoted to Colonel and placed in command of base camps at embarkation points in the south of France. His war decorations included the Croix de Guerre, the Distinguished Service Medal and the Order of the Purple Heart. He returned to the United States in 1919 and resumed private practice. After a few years, he retired and came to Washington to live.

Dr. Coe was the oldest living member and Dean of the Medical Reserve Corps of the Army. He held membership in numerous military and honorary organizations. Membership in professional organizations included the Medical Reserve Association, the Association of Military Surgeons, the American Medical Association, the New York State Medical Association, the New York County Medical Association, the New York Clinical Society, the West Side Medical Society, the Obstetrical Club, the American Therapeutic Society, the Harvard Medical Society and the Washington Obstetrical Club. He was a Fellow of the Edinburgh Obstetrical Society, a Fellow of the New York State Society, a Fellow of the New York Academy of Medicine, a Fellow and former Governor of the American College of Surgeons, and a past President-general of the American Gynecological Society.

In 1883 Dr. Coe married Sarah Werden of Pittsfield, Mass., who preceded him in death in 1936. Two sons survive, Arthur Paul Coe of Washington and Fordyce Baker Coe of Greenwich, Conn. Burial was in Arlington National Cemetery.

CHARLES RICHARD, M.D.

(1854–1940)

CAT.

Brigadier General Charles Richard, Medical Corps, United States Army (retired), died April 19, 1940 at his home, 2448 20th Street, N. W.

General Richard was born in New York November 10, 1854, the son of Jacob and Fredericka (Herbig) Richard. He graduated from the College of the City of New York and received the degree of medicine from New York University in 1876. In 1879 he was commissioned First Lieutenant, Medical Corps, U.S.A., and by 1910 had attained the rank of Colonel. At the time of the World War he was commissioned Brigadier General, the rank he held upon retirement November 11, 1918. From 1889 through 1891 he was lecturer on military surgery and Professor of Surgery at the University of Colorado.

General Richard was a member of the American Medical Association, the Association of Military Surgeons, the Military Service Institution, the Naval and Military Order of the Spanish American War, and the Order of the Carabao.

General Richard married Laura R. Bailey of Nashville, Tennessee in 1887. Surviving him are two sons, Charles Bailey Richard of Washington, and Frank Thomas Richard of Providence, Rhode Island. He was buried in Arlington National Cemetery.

ARTHUR MUNSON MACNAMEE, M.D.

(1874–1940)

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Dr. Arthur Munson Macnamee, Associate Member of the Medical Society, died February 7, 1940 at his home in Ohio near Owensville, Clermont County, where he had been practicing medicine for the last three years.

Dr. Macnamee was born in Washington, D. C., March 5, 1874. He received his degree in medicine from Georgetown University in 1898 and began practicing in the District in 1900. He became a member of both the Medical Association of the District of Columbia and the Medical Society in 1903. He was transferred to Associate membership in 1936.

Dr. Macnamee served in the Medical Corps during the Spanish War and the World War and was a member of the American Legion in Williamsburg, Ohio.

Surviving him are his widow, Edith Hill Macnamee of Owensville, Ohio; a brother, Bruce Macnamee of Washington, and a sister, Mrs. Edith Bell of Chattanooga, Tennessee.

(Continued from page 158)

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(Continued from page 170)

attempts to follow the next day, and failures to adhere to the schedule are analyzed by the patient with the help of the therapist. 3. The occupation of the patient is carefully considered, not so much from the perspective of its alcoholic dangers, since this is largely fallacious, but more from the perspective of whether the occupation is as suitable as possible for the intellectual and emotional equipment of the patient. Extra-occupational interests and hobbies are encouraged. 4. An attitude of social honesty is encouraged.

The chief items in the physical phase of the treatment are: 1. A thorough physical examination and the correction of morbidities. 2. Production of a physical optimum for each patient. 3. Guarding against overfatigue. 4. Improvement of the nutritional situation. The eating habits of the patient are usually very sketchy, and a sensible meal schedule is important. 5. Frequently there are low blood-sugar levels at certain times of the day. It is helpful to suggest that the patient take candy, cookies, etc., in the middle of the morning and late afternoon. 6. Vitamin therapy.

The results from the treatment method which has been outlined are quite satisfactory.

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PROGRESS AND PERSONALITIES IN EARLY FRENCH SURGERY*

JOHN H. LYONS, M.D.
Washington

The choice of a subject for my presidential address was not easy. So many entirely satisfactory topics came to mind that it was very difficult to select one and discard the others.

After a great deal of thought and several changes of mind, I finally decided to talk about early French surgery. What influenced me most in making this decision was that early surgery in France was outstanding and yet the men who made it so are hardly more than names to most of us.

The real founder of French surgery isn't a Frenchman at all, but an Italian—Lanfrank. He owes his French fame to two distinctly non-surgical phenomena, politics and marriage. After studying surgery at the University of Salerno, and under the great Salicet, he took part in a local political fight, ever an injudicious side-line for a doctor. His side lost and he had to leave Italy. In 1295 we find him in Paris, knocking at the doors of the distinguished University of Paris. But this institution, following the custom, if not the command of the Church, insisted that members of its medical staff be celibates; and Lanfrank had a wife.

Denied admission there, he went to the neighboring College of St. Come which had been founded in 1211 as a training place for the men who had taken over the surgical tasks which the Church had made the medical men lay down. St. Come had no rule against married men; so, to its immediate gain and its future glory, it welcomed the brilliant young Italian. Presently its Dean, Jean de Passavant, suggested to Lanfrank that he write a book. It might help the reputation of the struggling school. Whereupon Lanfrank wrote his "Great Surgery," in 1296. It was a great book, and for many years the surgical classic.

Thus, almost by accident, did Lanfrank transfer the prestige of surgery from his native Italy to his adopted France. And laid in France the foundations of a scientific as well as a practical surgery.

I can't point to many startling changes in technic that he introduced; but I can point to several fundamental changes in thought that today seem so natural and necessary that we take them for granted.

He was a student of tradition; never a slave to it.

He dared defy the teachings of Theodoric, the venerated Italian, and warned that trepanning of the skull was being greatly overdone. That point of view was close to heresy in those days, for this operation was the earliest form of surgery and had been continuously popular since the boisterous days of Neolithic man.

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* Presidential Address read before the Society, April 24, 1940.

He also went counter to Theodoric and advised, in a case where a nerve had been completely divided by a cross wound, that the ends of the nerve be stitched together.

He was the first to describe concussion of the brain. When it was a question of skull fracture, he threw up his hands and suggested calling on the Holy Ghost. Which may not have been such bad advice, surgical procedures being what they were in those days.

He began the battle, and it was to be a long one, to take bloodletting out of the hands of the village barber.

He was the first to beat at the barriers between medicine and surgery.

As a teacher he was a pioneer, for he placed a high value on clinical instruction.

Lanfrank's most famous pupil was Henri de Mondeville, born both a Frenchman and a wit, with a tongue as sharp as his scalpel. Educated at the University of Montpellier, one of France's famed medical schools, de Mondeville continued his studies at the University of Bologna, Italy's famous anatomical school. In 1304 he came back to Montpellier to teach anatomy, and once again France profited by Italian training.

His surgical code might be summed up in these two rules:

1. Give Nature a chance.
2. Give Anatomy more credit.

As to the first, de Mondeville, like his teacher, Lanfrank, had the courage to break with tradition. He went back to the second century to pick a quarrel with the great Galen. The basis of the quarrel was this: should a wound be permitted to heal by "first intention," or should the formation of pus be stimulated first?

Galen had said, in substance, "Have pus form first. Apply salves and unguents to make it form." De Mondeville contradicted him, in words to this effect, "Not at all. Wash the wound clean. Then leave it alone. Give Nature a chance." The sharpest thing he ever said, the sentence that has cut its way into history, is this caustic comment on Galen, "God did not exhaust all his creative power in making Galen."

As to his second rule, "Give Anatomy more credit," he maintained that no small part of surgical dexterity is based on anatomic familiarity. This was not a particularly popular theory at that time, since dissection of the human body, on which a sure knowledge of anatomy had to be founded, was difficult, often dangerous.

De Mondeville was instrumental in other advances. He reintroduced the use of the large magnet to extract portions of iron from the tissues. He invented a new and needed type of needle and thread holder. He invented a small derrick-like tool for the extraction of barbed arrows. Like many of his colleagues, when he didn't have the instrument he desired, he went off and made it. He also suggested surrounding the buried barbs of arrows with tubes, to facilitate their extraction.

The early surgeon gained much of his experience, even as he gave much of his service, in war. Here were to be found skulls cracked open by a battle-axe; flesh torn by barbed arrows; and, later, wounds made by gun-powder! The battlefield has always been the proving ground for certain types of surgery.

De Mondeville, like his teacher, believed that medicine and surgery were not foes, but allies, complementary parts of the same whole. The layman, as well as the professional man, will always remember his witty writings.

For instance, he describes the first quality of a surgeon as ". . . boldness tempered with enough wisdom to avoid undertaking a really dangerous operation unless he is certain that it is the only way to avoid a 'greater danger.' " On the practical side, he cautions the surgeon that he "may give advice to the poor for the love of God only; but the rich should be made to pay well." And he warns, "Never dine with a patient who is in your debt; but get your dinner at an Inn. Otherwise, he will deduct his hospitality from your fee."

In order to make his patients happy, de Mondeville introduced several little pleasantries into the sickroom. Contrary to the prevailing starvation treatment, he ordered wine and other potions, called "wound drinks." He prescribed music as medicine.

Carrying his doctrine of bedside cheer even further, he sometimes thought it advisable to forge letters telling the patient of the death of his worst enemy. Or, if the patient were a churchman, to notify him he'd been elevated to a bishopric. History does not record the relapses that must have occurred when the convalescent got well enough to learn the truth.

Before we leave this picturesque personality, I want to call attention to his attitude of mind. He felt indebted to the past, but wanted to be independent of its mistakes. He admitted ignorance of the future, but wanted to be tolerant of its miracles.

One of the "miracles" of the immediate future was a Frenchman named Guy de Chauliac. He was a young medical student when de Mondeville lay dying. We call Lanfrank, quite properly, the Founder of French Surgery. We call de Chauliac the Father of French Surgery, with all the additional national pride which that title implies. For by his time, 1300 to 1370, surgery had become one of France's greatest national products.

During the late Middle Ages, war had developed some excellent surgeons. These surgeons, denied the benefits of a more formal academic training, had gained their practical training in that traditional nursery of surgery, the battlefield.

The medical men at Paris, Montpellier, and other universities clung to their prestige and their prejudice. But these other men who were fighting to rise above the barber-surgeon went out and made the progress during this period.

One of the great examples of this progress was Guy de Chauliac. Son of a peasant, he became surgeon to Popes, three of them, Clement VI, Innocent VI and Urban V. As author of the "Great Surgery" or "Inventarium" in 1363 he wrote the first important and complete work on surgery produced in all Europe. Widely translated, it became the principal surgical textbook down to the eighteenth century. Historians herald it as the foundation of modern surgical doctrine in Western Europe.

What of the man and his method? De Chauliac was born about 1300 in a small French village. Friends enabled him to take Holy Orders, and to get the medical education he so eagerly desired.

Surgery, at this time, was neither recognized nor taught as a distinct branch of medicine. Its principal practice was still left to the barber. But in spite of all the barriers the clerical and academic circles in Paris had erected against it, surgery in Paris was attracting the attention of the world. This was due, primarily, to Jean Pitard, who had founded the College of St. Come; to Lanfrank, who had worked there; and to de Mondeville who had followed him.

About 1348 de Chauliac was called from Lyons, where he had both an ecclesiastical appointment and a practice, to go to Avignon, then the controversial home of the Popes, to serve Pope Clement VI. He spent the rest of his life there.

Shortly after his arrival, the Plague, the dreaded Black Death, visited Avignon. Most of his colleagues fled in terror. He stayed at his post. He finally got the disease himself; for six weeks he lay near death and then recovered in time to help others recover.

The pestilence, for all its horror, made a contribution to the progress of surgery. Its terrible ravages and its tremendous death list jolted the authorities out of their complacent indifference to public health. As a result, the guild of barber-surgeons became a sort of public health service. This increased the guild's power and prestige.

This may not have been a long step forward, but it was a step.

The next step, and it was a long one, came 15 years later when de Chauliac published his "Great Surgery." In it, he, like de Mondeville, emphasized the importance of a knowledge of anatomy. He made this effective comparison: "In the same manner that the blind man worketh in hewing of a log, so doth a surgeon that knoweth not anatomy."

That took courage, for dissection was still an unpopular subject.

De Chauliac did some first-rate pioneering in the field of surgical aftercare. For instance, he was the first to hang a rope over the bed so the patient could raise himself.

By his work and his writing he rescued the treatment of rupture from the wavering hand of the wandering quack. Before he made the operation "respectable," surgeons thought it beneath their dignity to operate for hernia. Hence the operation, shunned by the surgeon, was exploited by the itinerant, and often ignorant, craftsman or charlatan.

To a lesser degree this was also true of the operation for cataract, which de Chauliac likewise rescued.

He advocated the early cutting of cancer.

He was the first to point out the danger of neck surgery.

He anticipated our modern treatment for the broken thigh bone.

He made helpful contributions to the treatment of compound fractures, skull fractures, chest wounds and amputations.

He cautioned against the use of the cautery, then so excessively used, except in the worst cases of hemorrhage.

All of this was good; some of it, excellent. But he made one great error. Scorning de Mondeville's plea to let wounds heal by "first intention" he went back to Galen for his authority that pus must form before healing can start. He filled two chapters of his book with reactionary recipes for salves and ointments to be poured into a wound to cause this suppuration.

In making this error he was merely echoing the majority opinion of his day. But, because he was greater than his contemporaries, his error had greater influence. So great, indeed, that it persisted, with a few exceptions, for 200 years, until his own countryman, Pare, disproved it dramatically on the battlefield.

Again we see the close relationship between war and surgery. Europe was at war during most of the fifteenth and sixteenth centuries. Often the wars were so frightful they obliterated all records of research. But the actual experience was so vast and so varied that surgery profited tremendously. True, the physician and the professor still had a prejudice against the surgeon; but the surgeon went off to war and learned more, perhaps, than he might have in the University's peaceful classroom from which he was excluded.

The exciting proof of this argument is furnished by Paré, who started as a barber-surgeon and climaxed his career as the greatest surgeon of his time, one of the greatest of all time—Paré, beloved by mighty King and humble soldier.

Ambroise Paré, son of a peasant, was born near Laval, France, in 1509. As a lad he was sent to the village priest's home to trade menial work for mental reward. He performed his household tasks, but the priest never taught him the Latin he wanted to learn. He wanted to learn Latin because he wanted to be a doctor.

Finally he left the priest's and worked his way up to Paris where, in 1529, he apprenticed himself to a barber-surgeon. In 1532 he was a "dresser" at Hotel Dieu, the city's largest hospital. He tried to get into St. Come, but was refused. He didn't know Latin.

In 1536 war came and furnished the opportunity for the development of a great surgeon which the college had denied. He went to war, just a barber-surgeon, with no rank and no salary, save the occasional fee a grateful soldier might be able to give him.

On that first trip to the front he made history by defying history.

During the army's retreat from Turin he was dressing wounds and he ran out of the boiling oil which was then universally regarded as absolutely essential for the treatment of gunshot wounds. He was obliged to finish his dressings with the only substitute at hand, a mild salve. He spent a feverish night, fearful lest the wounded so treated would be dead next day. Up at dawn, he made the rounds, to behold a morning miracle. The men whose wounds he had dressed with the mild salve were much better than the others whom he had been able to treat in the old, orthodox and very painful way. Whereupon he abandoned boiling oil forever and took the lead in the bitter controversy that ensued.

This accidental incident on the battlefield had a far-reaching effect. It refuted the theory of John of Vigo that gunshot wounds were, of themselves, poisoned. And it channeled an entirely new course in that great field of military surgery, the treatment of gunshot wounds.

In that same campaign, in which Paré was on the field almost from the first day, he was the central figure in another lively incident. An officer, hit by a bullet, fell to the ground moaning that the enemy had "got" him. Paré rushed to his side and saved his life; then, turning to the wounded man's grateful comrades he said, modestly, "I dressed him and God cured him."

Seven humble words. They became the text of his profession; the philosophy of his life. Again and again, after a surgical triumph he repeated the phrase.

These same seven words, not in learned Latin, but in simple French, are cut in stone beneath his statue standing in Paris today.

After three years at the wars, Paré returned to Paris to study; to become a Master barber-surgeon, but still only a barber-surgeon.

Back in battle in 1543, he was again the center of a drama. Several surgeons, the "most expert in the army" we are told, were unable to locate a bullet in a wounded soldier. They called in Paré. He made the soldier stand up and assume the exact position he had been in when struck. Almost instantly then Paré found the bullet. By his success he introduced a new technic in probing for bullets.

When Henry the Second came to the troubled throne of France in 1547, Paré had a friend at court. He was also making thousands of friends on the battlefield, and making a reputation.

A few years later, in amputating a soldier's leg, he used the ligature instead of hot irons to cure the hemorrhage. That was a daring procedure in those days. Before employing it he had discussed its possibilities with two members of the faculty of St. Come. Both recalled to him that it had been used before, but never very successfully. Both thought it worth trying again. Paré tried it and was successful.

By this successful reintroduction of the ligature of blood vessels to stop hemorrhage following amputations, he made amputations much safer, much less painful.

St. Come now had its eye on this surgeon. It was one thing to refuse recognition to an unknown barber-surgeon because he couldn't talk Latin. It was quite another thing to ignore a military surgical genius who was a favorite of the ruling monarch. When Paré had been captured by the Spaniards in 1553, Henry the Second had hastened to ransom him.

So the great St. Come made the advances and invited Paré to become a member. The College refused to accept an entrance fee. The examination was a mere form. And of course nothing was said about Latin, or the lack of it.

That was in 1554. Paré was 45. Five years later Henry the Second died, but his successor, Francis the Second, retained Paré as surgeon-in-ordinary. So did his successor, Charles IX; and his, Henry III. For the rest of his busy life, Paré alternated between the bloody field of battle and the slippery floor of the royal court. He kept his head in both perilous places, and had the time to write a book.

His "Ten Books of Surgery," published in 1564, first recorded his method of ligating blood vessels after an amputation. His championship of this new theory as against the old-fashioned cautery aroused much protest. His most vigorous and most vicious opponent was a man named Gourmelon, who was too cowardly to sign his bitter attack, and used a young student as the catspaw.

Paré answered him, and history gives the judgment to Paré.

His achievements are manifold. He revolutionized the treatment of gunshot wounds by abandoning the use of boiling oil. He reintroduced the ligature of blood vessels after an amputation and condemned the cautery. He improved and popularized trusses for support of ruptures. He improved the manufacture of artificial limbs. He made several orthopedic innovations. He made significant contributions to obstetrics, including his recommendation of podalic version and of induced labor in certain cases.

There was hardly a branch of surgery to which he didn't add something in theory or practice. He did much to elevate it from a craft to a career, and he sent it a step further up the road toward a science. One historian puts it this way: "But the greatest of all Paré's contributions to surgery was the service of his own personality."

With his death, in 1590, a glorious era of French surgery came to an end. Then followed a century of slumber before the great awakening in the eighteenth century.

But the seventeenth century cannot be dismissed quite so easily, since it included several events which helped the progress of surgery.

In 1665 Colbert founded the Academy of Sciences.

In March, 1673, Pierre Dionis, at the command of King Louis XIV, gave a public demonstration of anatomy and surgical operations in the Royal Garden. This event, with its royal sanction, is hailed by the historian as the beginning of true surgical teaching in France.

The medical schools began to add courses in descriptive anatomy. Dissecting amphitheaters were built. Many teachers of anatomy were prominent surgeons. Surgery and medicine, as Lanfrank and de Mondeville had long ago maintained they should, were coming closer together.

Surgery and medicine, it is true, were slowly coming together, but the union was not to be consummated without many incidents of tense rivalry.

One of the most dramatic is this:

In 1724 Louis XV established five chairs in surgery at the surgeon's school, St. Come, in token of his friendship with Georges Mareschal who had long been helpful to the royal household. Such royal emphasis on surgery aroused the anger of the University of Paris, still loyal to medicine as apart from surgery.

Accordingly, one wintry day the entire Paris University Faculty, resplendent in robes of scarlet, marched over to St. Come to make a protest. The procession was led by the school's professor of anatomy, carrying a pole from which dangled a ghoulish skeleton.

A spokesman for the Paris University attempted to make a speech, telling the surgeons of St. Come how much they owed to physicians. But the surgeons and students inside St. Come began to jeer. Finally, even the crowds in the street, usually so reverent to physicians, added to the noise and the speech couldn't be heard. The Paris Faculty, in robes of scarlet, hurried home through the snow.

Seven years later, in 1731, the King again helped the cause of surgery. He founded the Royal Academy of Surgeons at the behest of his old friend, Mareschal, and two other military surgeons, La Peyronie and de la Martindere.

A third time the King helped. In 1743 Louis XV issued an ordinance which freed the surgeons from all further professional association with barbers and wig-makers. Henceforth these latter "gentlemen" were forbidden to do anything more surgical than shave a chin or trim a beard. The ordinance also raised the academic standing of the surgeon by ruling that, from now on, no one could be a master in surgery who was not first a master in the arts.

This famous edict of 1743 has been called the

French surgeon's Declaration of Independence. It made him a professional man, with an academic background, an independent future. The surgeon at the King's elbow when he wrote this ordinance was La Peyronie, who, perhaps, did more than any other to make Paris the surgical center of the world in his day. But there were many other illustrious names, so many that I have time to list but a few, and most briefly.

There was Petit, who invented the screw-tourniquet, who was the first to open the mastoid process, the first to explain softening of the bones and the formation of clots in wounded arteries.

There was Desault, who founded the *Journal of Surgery*, and who made advances in the treatment of fractures, as well as the ligating of blood vessels.

There was Chopart, who gave his distinguished name to his method for foot amputation.

The name of Moreau is associated with excision of the elbow. Venel won fame in surgical orthopedics.

There were many others.

The year 1800 found surgery the absolute peer of medicine in France, and that meant in the world, for France was then the medical center of the world, attracting students from all parts of the globe. Many came from America.

Great surgical history was being made in Paris, in 1818, at three celebrated clinics: the Hotel Dieu, under the renowned but ruthless Dupuytren; the Hospital de la Garde, directed by the great Larrey; and Charite, headed by Boyer.

Guillaume Dupuytren was unquestionably the ablest French surgeon of his day; his colleagues called him "a giant among surgeons" and "second to none." But, unfortunately, they did not hold him in the same personal esteem. One called him "the first of surgeons, and the least of men."

Pupils feared him, but followed him. Patients feared him, but flocked to him. His private practice alone is estimated at 100,000 patients a year. His colleagues envied his skill; winced under his scorn. He would tolerate no rival. He had none. He was an excellent diagnostician, a deft operator, a careful clinician. He was a student and a teacher.

He was the first to excise the lower jaw; the first to treat aneurysms successfully by compression.

Dupuytren perfected a new technic in operations on wry neck.

He made remarkable achievements in vascular surgery. And, of course, he gave his name and his skill to "Dupuytren's contracture."

Since Dupuytren performed a greater variety of operations than any surgeon before him, and since he introduced a new technic, or improved an old one, in nearly every type of operation he performed, the complete list of his accomplishments would be a very long one.

Almost as famous, and far more friendly, was Jean-Dominique Larrey, surgeon-in-chief to Napoleon's army, and personal surgeon to Napoleon who praised him as "Larrey, the most virtuous man I have ever known."

Larrey was the great military surgeon. He was present at 60 battles and 400 engagements. He was twice wounded, once at Waterloo, where he was taken prisoner. He had, doubtless, the highest numerical record of amputations of any man up to his day. Once he performed 200 operations in 24 hours. Again, that inevitable relationship between war and surgery.

Whatever the historian has to say of Napoleon, the surgeon has to give him thanks for his service to surgery. He made a practice of selecting promising young men from the ranks and training them for surgeons, advancing them as they developed. Larrey was the high point of this system.

Larrey was idolized by the soldiers, not only for his skill, but for his humanity and his bravery. He reintroduced and improved the "flying ambulance" system on the field of battle, and really originated the "first aid" to the wounded. He did much to improve procedures in amputations and other wound surgery. He was the first to amputate at the hip joint. He wrote well, and with the authority of experience.

Less spectacular than either of these geniuses, but substantially important, was Alexis Boyer, head of the clinic at Charite at this same time. A pupil of Desault, an able operator and a careful teacher, he is best known for his "Treatise on Surgical Disease," a comprehensive work based on the technics and theories of the French Academy of Surgery.

There were others, too, who came along a little later, but who can come under the rather flexible wire that binds this period and this discussion.

Nelaton deserves credit for the introduction of ovariotomy in France. His book, "Elements of Surgical Pathology," was the most important contribution to that important subject that had yet appeared anywhere. He is remembered, too, for this amusing story. It was, we recall, in the days before anesthesia. He once amputated the leg of a rich patient; presented him with a bill for 1500 francs, then about $300. The patient objected. "All that money," he protested, "and you took only five minutes." "True," said Nelaton quietly, "but I could have taken an hour had you preferred." The fee was promptly paid.

There was Velpeau, the blacksmith's son who had once been apprenticed in his father's trade. He was a capable operator, a painstaking teacher, and a thorough anatomist. His treatise on "Diseases of the Breast" was the best work on the subject at that time. He was a plain person, with none of the sartorial elegance that marked some of his colleagues. This simplicity, however, pleased Oliver Wendell Holmes, who wrote of him, "A good sound head over a pair of wooden shoes is a good deal better than a wooden head belonging to an owner who cases his feet in calfskin." Time has not dimmed the sharpness of that truth.

But now the period, broadly, of early French surgery, is drawing to a close. Morton, Pasteur and Lister are about to make their great contributions, contributions which will conquer pain and sepsis, and thereby transform surgery from a science which is practically at a fixed point to a science in which progress will become rapid and comparatively easy. We owe a great debt to those early French surgeons, Lanfrank, de Mondeville, de Chauliac, Pare, Dupuytren and all the others, who struggled on without anesthesia and asepsis, and yet who, in spite of barriers and prejudices, were able to advance surgery from a lowly craft to a respected profession. We can best repay that debt by carrying on our own work, in whatever sphere it may be, ever mindful of the words of Pare, the greatest of the early French surgeons: "You will have to render account, not to the ancients, but to God, for your humanity and your skill."

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The possibility of utilizing the general hospital as an effective medium for case-finding in tuberculosis has not been sufficiently explored. The fact that a person is admitted to a general hospital for a condition other than tuberculosis should never be accepted as a guarantee that such person does not have significant tuberculous disease. In a study of 4,853 adult admissions to 14 general hospitals in New York State, 1.1 per cent showed clinically significant tuberculosis and 0.6 per cent unsuspected tuberculosis. Plunkett, R. E., M.D. and Mikol, Edward X., Am. Rev. Tuberc., March, 1940.

A NEWER AND SAFER TECHNIC IN THE MANAGEMENT OF APPENDICITIS WITH PERFORATION*

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Despite the enormous and rapidly expanding literature on appendicitis there are still several features of this problem well worthy of repetition and emphasis. Appendicitis is by far the largest surgical cause of death, accounting for a mortality more than 50 per cent greater than intestinal obstruction, its nearest competitor. Although results vary widely in current reports, it is generally accepted that perforation is the crucial factor upon which the death rate depends. Upon this point alone mortality will be increased 25 to 40 times. Even in good hands this death rate from appendiceal rupture may be as high as 1 in 5 or 6 cases. Accordingly, it is no surprise to find wide variation in treatment routines as recommended in the literature on this subject. Most authors, however, do feel that the treatment is basically dependent on the time elapsed between the intra-abdominal catastrophe and the time treatment is instituted.

In view of the wide variety in methods of approach to the problem of treating appendicitis with perforation and in view of the continued high death rate from this condition, a review of the situation is in order.

For a number of years, as evidenced by the statements found in the current textbooks of surgery, drainage of the abdominal cavity with or without the removal of the focus of infection was considered the method of choice. During the last decade, however, some objection has been raised in regard to the rationale of this type of management. How weighty these objections are, I shall attempt to illustrate by the following data based on a study of 46 consecutive cases of ruptured appendices without a death, in which excellent results were obtained by the simplified method of removal of the infected focus without the use of intraperitoneal drainage.

Salient Data of Forty-six Consecutive Cases

While the average age of the patient operated upon and presenting a ruptured appendix was 27 years, the youngest was 4 years and the oldest 78 years. Up to the time of operation, the average number of hours from the onset of pain was 38, with 1 patient presenting symptoms for only 8 hours and another patient for 240 hours. Twenty-two of the 46 patients gave no history of having taken a laxative. The remaining patients had used varying doses of citrate or milk of magnesia, Epsom salts, Ex-lax, castor oil, etc. Eight patients were operated upon before a blood count was taken, and all but 1 of the others had an elevated white blood cell count, the average being 13,477, the highest 28,700, and the lowest 9,500. Only the last 11 patients received sulfanilamide as part of their postoperative treatment, revealing no significant difference in bringing the temperature down to normal. One patient's temperature returned to normal within a day without receiving sulfanilamide medication. Three patients ran an elevated temperature for 9 days, with the majority averaging 4 days. Cultures of the exudate revealed the Bacillus coli in the majority of the cases. Ten patients were operated upon under a spinal anesthetic, the rest receiving a general or avertin anesthesia. Only 16 patients developed complications. Four had a residual abscess and 12 developed a mild stitch abscess. Because of a ruptured incision (the only right rectus incision in this group), which necessitated a second closure, one patient remained in the hospital for 32 days. The average stay in the hospital was 11 days and 2 patients were confined for only 4 days. Aside from 2 patients who still had a slight drainage, all were discharged with the wound in good condition.

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* Read before the Society, January 24, 1940.

When acute appendicitis has been diagnosed and perforation is suspected, the following routine is recommended.

WHEN TO OPERATE

Some surgeons claim that once peritonitis makes its appearance operation should be delayed until the process is walled off. I feel that the quickest way to prevent the spread of peritonitis is by the early removal of the ruptured appendix. Of course, this is not an ironclad rule. In deciding between immediate and delayed operations, one should consider the individual patient with his presenting signs and symptoms and not depend entirely upon the time element. The great variation in rate at which the pathologic changes may progress in appendicitis is well known to us all. We have seen appendices rupture in 6 hours or less after the onset of symptoms and others which remain unruptured after 3 or 4 days. Catharsis plays an important part in producing rapid pathologic changes and rupture of the appendix, especially in children.

PREOPERATIVE TREATMENT

The preoperative treatment in these cases is the same as for any other major operation and may be considered under several headings:

1. *General Survey of the Patient.*—Needless to say, there should be a general history and physical examination as complete as the patient's condition will permit, as a preliminary to any operative procedure. Laboratory work should include at least a urinalysis.

2. *Treatment of Dehydration.*—In the presence of dehydration from lack of fluid intake, vomiting or fever, normal saline usually with glucose should be given preoperatively by the intravenous route unless there are contraindications; 1,000 c.c. is the average amount for adults.

3. *Selection of the Anesthetic.*—This is a part of the preparation because it determines the amount and kind of preoperative medication to be given. Because of the profound relaxation, spinal anesthesia is the choice in adult patients who are composed or phlegmatic, or in those to whom an inhalational anesthetic would be a hazard, as in the presence of respiratory infection. Other cases should be put to sleep usually with avertin as a basal to be supplemented by ethylene and oxygen. Avertin should be omitted from the general anesthetic if the patient's general condition is bad or there is specific contraindication to avertin, such as liver disease.

4. *Preoperative Medication.*—For spinal anesthesia or for ethylene without avertin, it is strongly urged that morphine either following nembutal or with scopolamine be used in dosage large enough to have the patient go to the operating room thoroughly composed and even definitely drowsy. For this result the average adult will require 3 grains of nembutal 2 hours before operation and $\frac{1}{4}$ grain of morphine sulfate 1 hour before operation. In the presence of nausea and vomiting the nembutal may be omitted and $\frac{1}{150}$ or $\frac{1}{200}$ grain of scopolamine given with the morphine. When avertin is to be given, a single small dose of morphine sulfate is given 1 hour before operation, followed by just enough avertin to induce sleep, given 20 or 25 minutes before operation. Atropine is entirely omitted.

OPERATION

1. *The Incision.*—The importance of this decision is often underestimated. A right rectus incision may be necessary for examination of the gall-bladder, stomach and pelvic organs, but acute appendicitis rarely justifies it. The McBurney incision gives the most direct access to the appendix with minimum exposure of the peritoneal cavity. It permits avoidance of undue use of retractors, packs, rough handling and exposure of the omentum and intestines. Ventral hernia is rarely seen with this type of incision. It should be made as close to the rectus margin as possible and an attempt made to avoid cutting the ilioinguinal and iliohypogastric nerves. Damage to these nerves may

produce relaxation of the abdominal wall on the right side and may also predispose to an inguinal hernia.

2. *Removal of Exudate.* Excessive free fluid should be removed, since it may contain foreign material (fecaliths) or excessive amount of fibrin which may lead later to a residual abscess. Aspiration should be attempted gently, especially in the pelvis and right lower quadrant, so as not to injure the intestines. Sponges of all kinds should be avoided in attempting to remove exudate. No attempt should be made to remove all of the fluid. Culture and smear of the exudate is usually made to determine types of organisms, although this knowledge will not modify treatment.

3. *Removal of the Appendix.*—The appendix is freed and removed by the simplest manner possible. The mesoappendix is ligated with no. 2 chromic catgut and then divided. Next, the base of the appendix is ligated with no. 2 chromic catgut. A Kelly clamp is next placed about $\frac{1}{4}$ inch above this ligature, and the appendix is divided between the two. The stump of the appendix is cauterized with iodine. The base of the appendix is never crushed. A purse-string suture is useless and may be harmful. It is never employed unless infection at the base of the appendix or the adjacent cecal wall constitutes a danger of fistula. Adhesions do not and cannot form over a dead stump. Gangrenous and indurated omentum if adherent or firmly wrapped around the appendix should be removed with it. No attempt should be made to separate it from the appendix since it may contain an abscess.

4. *Drainage.*—It is a physical impossibility to drain the entire peritoneal cavity, even by multiple incisions and drains. It has been proven experimentally that from 24 to 48 hours after the drain is introduced the intestinal loops or omentum are widely agglutinated around the drain and that the actual area of drainage corresponds roughly to that of the surface area of the drain itself.

a. Indications for drainage exist:
(1) In cases in which the appendix cannot be removed.
(2) In cases in which a large amount of necrotic tissue is left in the abdominal cavity.
(3) In cases of walled-off abscess.

b. Contraindications for drainage exist:
(1) In all other cases of peritonitis.

c. Advantages of nondrainage:
(1) Less morbidity and less mortality.
(2) Minimized possibility of postoperative mechanical ileus.
(3) Shortened duration of illness.
(4) Decreased tendency to postoperative hernia.
(5) Exclusion of the possibility of developing a fistula.
(6) Lessened tendency to postoperative adhesions.
(7) Shortening of stay in hospital.

The abdominal wall which becomes contaminated at operation has little resistance to intestinal organisms, and, besides the incision made through it, transforms it into a partial reservoir, permitting the organisms and their by-products to fill up into it. Therefore, it is essential to insert a rubber tissue drain down to the closed peritoneum. Although the use of interrupted sutures in the muscles and fascia is also a factor in producing secondary infection within the incision, this procedure is essential in preventing the formation of a hernia.

The peritoneal cavity is closed with no. 1 plain catgut. A rubber tissue drain is inserted down to the closed peritoneum, and the internal and external oblique muscles are sutured with interrupted plain no. 1 catgut. The skin is closed with skin clips because skin sutures predispose to infection.

Postoperative Treatment

Intestinal obstruction following ruptured appendicitis and peritonitis is, in my opinion, the chief factor that produces death. Therefore, combating the causes of obstruction at an early period is of the utmost importance. The following steps in treatment have become a fixed routine.

1. Morphia or one of its derivatives is given every 4 or 6 hours for the first 24 to 48 hours. It stimulates the muscle tone and contractions of the intestines but does not stimulate peristalsis. It greatly relieves the nervous reaction of the patient and encourages sleep.

2. Drainage with the Wangensteen apparatus plus the Lavine tube through the nose is started immediately after reaction of the patient from the anesthetic. If operation is performed under spinal anesthesia it is applied immediately upon reaching the ward or room. Water may be given by mouth immediately after insertion of the Lavine tube. This apparatus is lifesaving and should be used more often. It is efficacious in the control of postoperative nausea, vomiting and distension as well as in the treatment of reflex and inhibitive (paralytic) types of ileus and in certain types of acute mechanical intestinal obstruction. After 2 or 3 days the temperature and pulse begin to subside, the abdomen becomes considerably softer, and the patient begins to pass gas per rectum. Then the tube is clamped at intervals and fluids are given by mouth to determine the patient's ability to retain them, and when this is demonstrated the tube is removed.

3. The maintenance of water and chemical balance is of the utmost importance. A continuous intravenous infusion of 5 per cent glucose in normal saline may be given; or as an alternate method intravenous injections may be made every 4 hours of 500 c.c. of glucose solution alternating with 1,000 c.c. of saline solution subcutaneously. The net intake for the average adult over and above the loss from the Wangensteen drainage (which, of course, must be accurately measured) should be about 3,000 or 4,000 c.c. daily, or 50 to 60 c.c. per Kg. of body weight.

4. Blood transfusions are given if the patient shows severe toxemia or if anemia is present. With few exceptions, transfusions are given if the hemoglobin is at or below 65 per cent.

5. The patient should be placed flat on his back with normal position of the bed. Fowler's position is not used since it has a tendency to encourage the formation of a pelvic abscess. The patient should be turned from side to side.

6. A complete blood count and Schilling index is ordered every morning to determine the necessity and type of supportive treatment (blood transfusions, etc.). These data aid also in determining the severity of the toxemia.

7. In the last 11 cases sulfanilamide was used in various forms. Most of the cases, with few exceptions, received 5 Gm. of sulfanilamide in 500 c.c. of sterile water subcutaneously daily until the temperature dropped. When this solution was not obtainable various forms of sulfanilamide were substituted and the doses were equivalent to the dosage used with the subcutaneous solution. Comparison of the temperature charts between the ones treated with sulfanilamide and those receiving no sulfanilamide revealed no variable difference. Therefore, the use of this drug, in my opinion, has proven of no special benefit to the patient.

8. Moist hot packs are applied to the abdomen if it is considerably distended. Otherwise, an electric pad gives the patient considerable comfort.

9. The wound is examined after 3 or 4 days to note localized tenderness or other signs of inflammation. If such evidence of infection is present, hot salt or boracic acid compresses are applied. The drain is removed if no signs of inflammation are present. Skin clips are usually removed on the fifth or sixth day.

10. A rectal tube is used regularly, unless it acts as an irritant, to aid the removal of flatus and fluids from the lower bowel.

OCHSNER TYPE OF TREATMENT IF OPERATION IS DELAYED

This consists in the use of the following:

1. Fowler's position.
2. Drainage with the Wangensteen apparatus.

3. Giving of liquids, water or tea, by mouth.

4. Injection of morphine or its derivatives regularly every 4 or 6 hours.

5. Continuous injection intravenously of 5 per cent glucose in normal saline solution, and giving of blood transfusions.

6. The use of hot abdominal stupes to localize infection and relieve distention.

This type of treatment is carried out when the patient shows evidence of severe toxemia (higher fever, rapid pulse and respiration, hippocratic facies, general rigidity of the abdomen, nausea and vomiting). This type of case usually makes its appearance 72 to 84 hours after the onset of symptoms. The treatment is carried out with the hope that the generalized peritonitis will resolve into a localized abscess. If the above symptoms occur within the first 48 hours, immediate operation should be encouraged since this procedure will prevent further leakage from the appendix into the peritoneal cavity and at this stage of the disease the resistance of the patient is still at a high level.

Conservative Treatment

When a localized abscess exists, close observation of the patient is very essential. The abdominal mass should be mapped out daily with an indelible pencil or some aniline dye to help determine a decrease or increase in size. If the mass is pelvic, gentle vaginal or rectal examination must be made to determine the size. The general appearance of the patient, the temperature, pulse rate and abdominal symptoms are to be observed carefully. A daily complete blood count is important and at times very instructive. A continued high leukocytosis indicates that the abscess is not subsiding. Usually within 3 or 4 days the temperature, pulse rate and leukocyte count will begin to subside, the mass will decrease in size, and the general appearance of the patient will show great improvement.

Indications for operation (following observation of 4 to 7 days) are:

1. Septic temperature and rapid pulse.
2. Presence or increase in size of mass.
3. Leukocytosis.
4. Increased abdominal pains.

If the mass continues to disappear, temperature and pulse rate subside, and the blood count returns to normal, all indications are that the patient will overcome this attack, and he should be advised to return within 6 weeks after discharge from the hospital for removal of the appendix. If the mass does not recede or if the signs of infection continue, a small incision is made over the abscess and a small Penrose drain is inserted. No attempt should be made at this time to remove the appendix. Hot compresses immediately following operation and irrigation of the wound later aid materially in rapid recovery of the patient.

Conclusions

1. Early appendectomy without drainage of the peritoneal cavity is the best treatment for appendicitis with perforation.

2. Lower mortality is, of course, the chief advantage of nondrainage of the peritoneal cavity in appendicitis with perforation; but, in addition, morbidity, suffering, and duration of convalescence are lessened and there is decreased danger of intestinal perforation, formation of adhesions with or without obstruction, and development of postoperative hernia.

3. Since the mortality is lower with nondrainage, it is reasonable to suppose that in some cases drainage may lead to a fatal outcome.

4. Early appendectomy should be advocated in practically all cases.

5. Catharsis increases the likelihood of appendiceal perforation and aggravates inflammation in all cases.

6. It is advisable to aspirate excessive peritoneal exudate.

7. The abdominal wall should be drained down to the closed peritoneum, and if the wound becomes infected hot compresses should be used.

8. The McBurney incision is recommended.

9. The value of sulfanilamide has not been demonstrated.

10. Daily blood counts are of value in the treatment. The cases seen late with abscess formation require close and constant observation for their proper management.

11. The regular postoperative routine for these cases includes adequate sedation, large saline and glucose fluid intake parenterally, blood transfusion when indicated, horizontal position of bed, and Wangensteen drainage.

12. In the presence of a residual abscess after appendiceal perforation this area should be drained.

It is obvious that the reduction in mortality can best be accomplished by early diagnosis and removal of the appendix before involvement of the peritoneum occurs. Each case of abdominal pain is a potential case of appendicitis and should be watched carefully and closely, laxatives and sedatives being withheld until a diagnosis can be reached. In those few atypical cases in which this may not be possible, early exploration is far safer than the risk of peritonitis following rupture of the appendix.

PERFORATED PEPTIC ULCER

A SUGGESTED METHOD OF TREATMENT

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In surgical literature discussions concerning abdominal incisions are appearing more frequently. It is being noted that in acute infectious abdominal conditions, where large incisions are made without proper consideration of muscles and nerves, wound infections and disruptions with evisceration are frequent. Amendola[1] and Hartzell and Sorock[2] recently have written on the subject of incisions in acute perforated peptic ulcer. Their small transverse incision meets the requirements so far as suturing the ulcer is concerned, but it does not allow thorough cleansing of the abdominal cavity.

All patients stricken with acute perforated ulcer move in every conceivable position; they walk, and usually they take various medicines, most frequently sodium bicarbonate and much water. Since vomiting is not a constant symptom, the entire abdominal cavity usually is contaminated. The pelvic cavity frequently is full and a suction apparatus can not reach this. Because of this fact, if two small transverse incisions are made, with the first an inch long over the appendiceal region, the pelvis and lower abdomen can be cleansed by suction and the appendix may be tied off. Incidentally, in the occasional instance of a wrong diagnosis, e.g., ruptured appendicitis instead of perforated peptic ulcer, the patient has the advantage of not having an upper abdominal incision. This incision is left open and a second one two inches long is made just below the costal border and over the right rectus. The rectus sheath and muscle are opened longitudinally and the transversalis and peritoneum are cut transversely. The ulcer is easily felt and brought into view with Allis clamps. If the ulcer is not causing stenosis, simple closure and fat from the inferior or superior border of the duodenum sutured over the defect suffices. Fat from the greater omentum or the falciform ligament should not be used. If the ulcer is causing stenosis, a fact usually learned from the history and found at the operation, then the incision is enlarged and a resection or gastroenterostomy can be done.

After the ulcer is closed, the abdomen again is thoroughly cleansed by suction through both incisions. The suction is passed over the dome of the liver and pressure is made on the liver. Usually a considerable quantity of fluid is found under the diaphragm. If the ulcer has been ruptured less than 10 or 12 hours, both incisions may be closed. However, if the rupture occurred a longer time before, it is best to close the peritoneum of both incisions and pack the remainder of the wounds with iodoform gauze. This gauze is left in place from 6 to 8 days. When it is removed, if the patient is afebrile and the wounds are clean, then they may be sutured. If they are not clean, they are repacked each day until they are healed. The patient may be home before healing is complete. Drainage of the peritoneal cavity is never done. The peritoneum always is closed tight. It is not the amount of the abdominal fluid which determines whether or not to sew the remainder of the wounds, but the length of time between the rupture and the operation that is the important factor. It takes time for the infection to become virulent. If the stomach is dilated and contains fluid, this is removed either through the rupture or by passing a tube through the nose. Leaving a tube in the stomach is necessary in but few cases.

TABLE 1

Summary of a Series of 31 Cases of Perforated Peptic Ulcer

The time of rupture before operation was from 4 to 25 hours, with the exception of 1 case, in which it was 8 days.

NAME	AGE	OPERATION	RECOVERED	DIED	DAYS IN HOSPITAL
R. R.	36	Sutured ulcer and appendectomy	1		7
A. A. O'C.	28	Sutured ulcer and appendectomy	1		7
Mrs. G. O. J.	57	Incision and drainage	1		13
E. E. H.	58	Sutured ulcer and appendectomy	1		10
W. E. S.	?	Sutured ulcer and appendectomy	1		6
R. B. C.	24	Sutured ulcer and appendectomy	1		9
H. H.	33	Sutured ulcer and appendectomy	1		6
F. C. C.	31	Sutured ulcer and appendectomy	1	*	6
J. P.	64	Sutured ulcer and appendectomy	1		14
E. C. W.	45	Sutured ulcer	1		8
H. B.	28	Sutured ulcer	1		6
R. F.	21	Sutured ulcer and appendectomy	1		14
F. X. K.	61	Sutured ulcer and appendectomy (under local) (Patient nearly morbid)		1	Few hours
H. R.	52	Sutured ulcer and appendectomy	1		9
C. E. S.	52	Sutured ulcer and appendectomy	1		4
A. J. H.	37	Sutured ulcer and appendectomy	1		12
J. L. S.	33	Sutured ulcer and appendectomy	1		7
J. E. G.	33	Sutured ulcer and appendectomy	1		9
W. W. R.	33	Sutured ulcer	1		4
C. P. R.	40	Sutured ulcer and appendectomy	1		8
H. J. M.	37	Sutured ulcer and appendectomy	1		10
J. P. M.	42	Sutured ulcer	1		7
G. W. Mc.	60	Sutured ulcer, gastroenterostomy, appendectomy	1		10
J. B. H.	60	Sutured ulcer and appendectomy	1		11
C. H.	28	Sutured ulcer and appendectomy	1		3
E. S. W.	28	Sutured ulcer	1		10
J. W. C.	69	Sutured ulcer and gastroenterostomy	1		18
C. D. (CNS Syphilis)	54	Sutured ulcer and gastroenterostomy	1		12
Mrs. M. R.	48	Sutured ulcer and appendectomy	1		14
J. R. W.	32	Sutured ulcer	1		9
F. K.	40	Sutured ulcer and appendectomy	1		8

* Returned 9 days later to hospital and died of dilated stomach from stenosis. If a gastroenterostomy had been done this patient probably would have survived.

Usually these patients are ready for food in 48 hours, i.e., they miss only six meals. A few will miss but five. Water is given by mouth after 6 to 12 hours. Of course, intravenous saline solution and blood transfusions for the late cases are always indicated. These patients are notoriously poor. The traveling indigent, with a yen for alcoholics, so frequently is a victim. Therefore, the average of only 6 to 12 days' hospitalization that is required is appreciated by all.

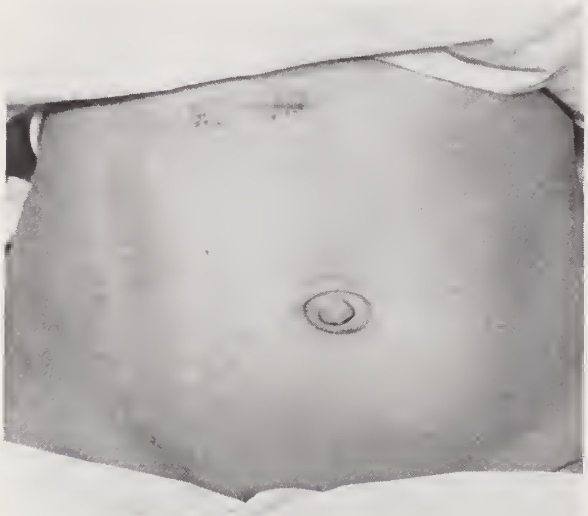

FIG. 1. The two incisions

A brief summary of a series of 31 consecutive cases of ruptured peptic ulcer is given in table 1. Three in this series had a gastro-enterostomy done. The photograph of the abdomen showing the two incisions was made a few weeks after the operation (fig. 1). The patient was one of the two females of the series. She was somewhat stout and the incisions are larger than those needed for the usual very thin male patient. The number of patients in this series is too small to permit one to form any definite idea about the mortality rate, but the morbidity was very much lessened and the mortality of approximately 6.5 per cent is not excessively high.

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PAPER READ BEFORE THE SOCIETY, JANUARY 17, 1940

"NEW DRUG REGULATIONS." **Charles B. Campbell, M.D.,** Washington.

Medicine is making great advances daily and new drugs are constantly being put on the market for the treatment of the sick. The laity, through reading daily papers and magazines, are learning of these new remedies. They try to buy them over the counter in the drug stores for self-medication. Many are dangerous drugs unless prescribed by a physician and used under his immediate observation. The pharmacists of the District of Columbia have through their Association's action refused to sell these preparations; they dispense them only on a doctor's written prescription and do not renew the prescription unless the doctor orders it.

There are many such preparations. The names are different, but the synthetic chemicals are the same. A partial list of well-known proprietary chemicals includes Alkamide Tablets, Amidopyrin, Amytal, Atophan, Causalin, Farrastan, Felsol, Medinal, Peralga, Pyramidon, and Tolysin.

The foregoing list comprises proprietarily named drugs that have been on the market for some time. A newer line of drugs includes Sulfanilamide, Neo-Sulfonol, Prontolyn, Neo-Prontosil, Sulfapyridine, Cinchophen, Neo-Cinchophen and related drugs.

Recently there was issued to the druggists of the United States the following letter signed by W. G. Campbell, Chief, Federal Food Drug and Cosmetic Act, that became a law in 1939. "Sulfanilamide and drug preparations containing sulfanilamide or related compounds for indiscriminate use by the general public in a manner which constitutes a serious danger to health, are, when found in Interstate Commerce, actionable, in the opinion of the Food and Drug Administration, under Section 502 (j) of the Federal Food, Drug, and Cosmetic Act, which section of the law is now in effect.

"It is the consensus of qualified experts that sulfanilamide is a valuable aid to the treatment of several serious disease conditions when the dosage is properly adjusted to the requirement of the individual patient and frequency of dosage and duration of treatment are intelligently and expertly directed. It is further the consensus of such experts that when used under other conditions it is a dangerous drug, capable of causing serious injury and even death.

"In the light of these facts, careful consideration has been given to the status of sulfanilamide under the provisions of the Food, Drug, and Cosmetic Act which deals with traffic in dangerous drugs."

As to narcotic prescriptions containing opium and its preparations, the Narcotic Law is not new but has

(*Continued on page 226*)

THE HEALING OF INTRACAPSULAR FRACTURES OF THE NECK OF THE FEMUR

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There can be no intelligent conception of the treatment of intracapsular, or indeed of any type of fracture without an adequate knowledge of the factors involved in the process of osteogenesis, of the pathologic condition accompanying the injury, and of the deranged physiology which one seeks to restore to normal.

The effort to construct in one's mind a logical and useful picture of the healing process as regards these fractures is almost impossible. To begin with, there is no unanimity of opinion on many basic points. Do there exist in the human adult specific bone-forming cells, osteoblasts? If they do exist, are they derived by metaplasia of ordinary fibrillar connective tissue? Do osteoblasts play any active part of a specific nature in the process of the healing of fractures? Is an enzyme involved in the deposition of calcium at the fracture site? Is there enough evidence to assume the existence of a pre-osseous substance? What role does the endocrine apparatus play? An attempt will be made to reconstruct the progress of thought as regards these and other fundamental questions concerning the healing of intracapsular fractures of the femoral neck.

THE NATURE OF THE PROCESS OF OSTEOGENESIS

The foundation of the still flourishing controversy over the growth and repair of bones was laid in 1691 by Clopton Havers,[1] who described in his Osteologia Nova what have since been known as the Haversian canals, by which the seemingly lifeless bone is nourished. The suspicion that bone was not to be regarded as a substance peculiarly untouched by those agencies affecting other types of tissue was further strengthened by the observations of J. L. Petit[2] in 1723, that softening does occur in osseous tissue.

Thirteen years later, in 1736, a London surgeon, John Belchier,[3] noticed a pink color in the bones of a joint of pork, and upon inquiring found that the pig concerned had fed upon the madder-soaked bran from a dye vat. Belchier found that this same bran could stain the bones of fowls fed with it, but here the matter rested for three years, when Duhamel[4] learned of it. He found that the bones of young animals took the stain best; that some portions of long bones stained more deeply than others, and that growth proceeds from the extremities of the long bones. He was unaware of the existence of the epiphyseal line, but his studies convinced him that the periosteum possessed regenerative power. De Haller[5] and his pupils found reason to disagree with Duhamel's last mentioned conclusion, and the war which still exists unabated as to the function of the periosteum in repair was on.

John Hunter[6] noticed that fragments of bone separated by fracture from the periosteum reunited with the main shaft, an argument against the significance of periosteum, and incidentally, the unwitting beginning of the bone-graft idea. On the other hand, Syme[7] was of the opinion that periosteum could form new bone, but in this matter he was opposed by Goodsir,[8] who, as a result of his microscopic studies, felt that the periosteum is only a limiting membrane, and that its apparent osteogenic power really belonged to the layer of cells easily stripped up with it from the surface of the bone beneath. To Goodsir must be credited the observation that living cells, and not, as Hunter thought, arteries and lymphatics, deposit and absorb bone.

With no organon to guide him, it remained for Ollier,[9] in 1867, to close this first historic chapter with his remarkable book upon the regeneration of osseous tissues, in which he gave his account of bone growth to which little has been added. Here, for the first time, we are introduced to the concept of growth from the various epiphyseal regions. It was Ollier's opinion that the deeper layers of the periosteum can and do build bone.

Macewen's essay[10] in 1881 on bone grafts revivified the subject by exhibiting one of its practical phases. Macewen was the pioneer in grafting bone. In 1912 he published the results of a comprehensive experimental study of osteogenesis in regenerating bone in dogs, and felt, as did John Hunter,[6] that the periosteum functions simply as a confining, nutritive and protective membrane. His observations led him to conclude that the osteoblasts are derived from proliferating cartilage nuclei freed from the disappearing matrix. Thus, when conditions are favorable, regeneration may occur through direct osteoblastic activity; under less favorable conditions a cartilaginous transition stage may intervene.

The work of Leriche and Policard[11] confirms the view that the so-called osteogenic layer of the periosteum has no bone-forming function; it may operate by arresting and confining osseous growth. The views of these investigators make it possible to place in our reliquary the paradox in the current view of osteogenesis which regards the osteoblasts as bone-builders and the multinucleated fusion products of these same cells, now called osteoclasts, as bone destroyers. They regard osteoblasts as osteolytic fibroblasts of more feeble capacity than osteoclasts; their function is said to be to inhibit the spread of osseous tissues. They may be overwhelmed by the growing bone; then they become incorporated as osteocytes, which are inactive, "useless parasites of osseous tissue." However, these writers hold that these osteocytes may be stimulated to function osteolytically under certain pathologic conditions. Bone formation is regarded as essentially a metaplasia of fibrous connective tissue; the deposition of bone in the fibrous matrix is dependent upon humoral and interstitial, not primarily cellular factors. Bone resorption is said to be the result largely of an osteolysis connected with humoral processes and to a very limited extent the result of the activity of the osteoclasts.

The theories held at the present time may be summarized as follows: 1. The periosteal theory presupposes that the periosteum and endosteum can and do form new bone, and that osteoblasts arise only from them. Let it be noted here that it is generally believed that even if the above be true, the periosteum of the neck of the femur contains no cambium layer and so cannot participate in the osteogenetic process. 2. The osteoblastic theory assumes that osteoblasts are liberated as such from their lacunae and that they then reproduce and form new bone. 3. Another variation on this theme is that fibroblasts are transformed into bone-producing cells during the period of repair. The confused state which this essential phase of the situation is in is reflected by the promulgation of a third theory, 4, which assumes that there is no definite bone-producing cell, but that calcium salts are deposited in the extracellular framework of connective tissue following injury and that the connective-tissue cell then becomes a bone cell by functional adaptation.

The Blood Supply to the Head and the Neck of the Femur

An adequate blood supply is conceded to be the most important factor in the production of callus. In view of this, a thorough knowledge of the circulation is necessary for the understanding of the various clinical courses which these fractures may pursue.

There are five sources of blood supply to the neck of the femur: (1) The ligamentum teres, (2) the vessels accompanying the capsular attachment to the neck, (3) the vessels accompanying the reflection on to the neck of a thin layer of capsule together with synovia up to the articular edge, (4) the nutrient vessels at the base of the neck, and (5) many small vessels derived from the muscular attachments about and along the inter-trochanteric region, entering via the periosteum.

The controversy regarding the vascularity of the ligamentum teres is not a recent one; its origin may be traced back to Paletta's statement in 1820, "The obturator artery gives off a small branch which passes through the acetabular fossa and divides into two branches, one for the fossa and one which traverses the round ligament to supply the head of the femur." There is still no crystallization of opinion on this subject, as may be gathered from the following brief citations.

The opinion is held by many that the main blood supply of the femoral head comes from the ligamentum teres or that this ligament contains important vessels going to the structure. Others contend that the ligamentum teres is of little importance. Kolodny[12] believes that union depends much more on the preservation of the periosteal vessels than on any circulation which may nourish the proximal fragment by way of the round ligament.

Nussbaum[13] and Wolcott[14] demonstrated anastamoses between the arteries of the ligamentum teres and the network of vessels in the head of a femur in a man 60 years old. Chandler[15] and Chandler and Kreuscher,[16] whose articles on the subject are among the most recent to be published, state that this ligament furnishes a significant source of nutrition to the proximal end of the femur in almost all individuals except when sclerosed or injured. Chandler enters the plea that these vessels should be spared in all operations in this region because they are the only source of nutrition to the proximal fragment following complete fracture of the neck of the femur.

There seems to be the general opinion that in most instances, the circulation, impaired though it may be, is still sufficient for securing bony union, provided that there is good anatomic approximation and adequate immobilization. When nonunion occurs, it may generally be explained on the basis of an initially adequate circulation which was compromised by the other aforementioned unfavorable conditions.

The Local Pathology

The local pathology created at the time of the fracture plays an important part in the healing of the wound. If the amount of tissue necrosis is excessive, it destroys available sources for the growth of granulation tissue, and creates a pH to the acid side locally.

The role of the hematoma has received its just share of attention only in recent years. Potts[17] believes that no calcium salt depositions or bony callus formation appear over the site of bone injury in the absence of a hematoma. The enzyme phosphatase may be taken up by the hematoma, stimulating the deposition of calcium salts and thus influencing the process of ossification. Bier[18] emphasizes the importance of the hematoma not only as a substratum but also as a stimulant for the growth of new bone. He thinks that this substratum acts as a nutritive base for the newly growing bone cells. Lexer,[19] on the other hand, is of the opinion that the blood merely serves as an indifferent filling into which tissue may grow. Kugelmass and Berg[20] digested away the blood clot by the injection of trypsin at the fracture site and thus produced delayed healing. They also found that more than the average amount of callus could be produced by the injection of fibrinogen into the fracture site.

It seems well established that the hematoma influences the growth of granulation tissue through its fibrin content, and the establishment of a local source of calcium by acting essentially as a decalcifying fluid. Through the absorption affinity between calcium and its fibrin content, it holds the freed calcium in situ.

The growth of granulation tissue, and the utilization of this local source of calcium is dependent on the circulatory status of the part, both in the early and late stages of the healing process. Furthermore, the amount of callus produced is probably directly proportional to the amount of granulation tissue produced.

The mechanical element, i.e., the interposition of living or dead material between the fragments is one of the more important aspects of the local pathology when present.

THE BIOCHEMICAL ASPECT OF FRACTURES

Certain observations are incontrovertible. It is certain that as a result of the death of tissue and of the circulatory impairment the local tissue fluid becomes acid. Within the following ten days there occurs a decalcification of the fracture site; the calcium so removed is held locally in the soft parts. As healing progresses, the pH of the local tissue fluid becomes higher, and coincidentally the redeposition of calcium occurs. In considering the processes underlying the above changes, one can only speculate. Studies by Robison[21] and Robison and Soames[22] seem to indicate that bone, and especially growing bone, contains a high concentration of the enzyme phosphatase, which is capable of hydrolyzing phosphoric esters such as glycerophosphates and hexosephosphates into inorganic phosphates. They concluded that this enzyme and bone metabolism were closely interrelated, and they evolved this hypothesis: "Osteoblasts and hypertrophic cartilage cells and certain cells of the inner border of the periosteum in a growing bone contain or can secrete a very active phosphatase, which by hydrolyzing the salts of phosphoric esters, brought to the ossifying zone by the blood stream, cause a local increase in the concentration of phosphate ions. The solubility product for calcium phosphate, which is probably very nearly reached at the concentration of inorganic phosphate and ionized calcium normally present in the circulating plasma pH, is thus exceeded locally, and a deposition of the calcium phosphate is brought about in the neighborhood of the cells which secrete the active enzyme."

There seems to be a consistent rise in the serum phosphatase level in the course of fracture healing, although in many cases there is a decrease. Mitchell[23] concludes that the serum phosphatase level following fracture is not an index of the healing or rate of healing of the fracture. Incidentally, he found no significant change in the blood phosphorus level following fracture. On the other hand, Pearse and Morton[24] believe this increase of phosphatase to be significant as a factor in the repair of fractures.

THE RELATION OF ARCHITECTURE TO PATHOLOGY

Kolodny[12] places much emphasis on the relation of the architecture of the head and neck of the femur to the pathology of fractures in this region. He studied the trabeculation of the femur by means of radiographed sections of the bone in different planes, and described three bundles of bony lamellae passing through the neck. Ward's triangle, situated between these bundles, is presumably the area in which the atrophy and rarefaction of old age begin and, as a consequence, is the site of weakness in the bone. Other bone changes in this area accompanying senility are cystic degeneration due perhaps to arteriosclerosis, and the disappearance of the buttressing calcar femorale, as described by Kocher and Hesse, cited by Hamilton.[25]

In the adult, the neck of the femur forms an angle of about 125 degrees with the shaft. In the aged, this angle may be decreased. The weight of the bone transmitted via the neck to the shaft is thus placed in an oblique axis. The neck is also deviated forward at the junction with the shaft, forming an angle in the anteroposterior plane of about 15 degrees. The head of the femur is thus on a plane anterior to the shaft and to the trochanter.

These changes cause a greater stress to be thrown on Ward's triangle, with quite understandable results.

THE ROLE OF THE DUCTLESS GLANDS

It would seem that there should be a rather interesting story to relate here, in view of the intimate coëxistence of bone pathology with altered physiology of the endocrines. The osteoporosis associated with a basophilic adenoma of the pituitary and with hyperparathyroidism; the acceleration of the loss of calcium and phosphorus from their depots in hyperparathyroidism and the existence of bone changes in this disease; the loss of minerals from the body associated with hypofunction of the adrenal cortex; human acromegaly caused by the injection of the growth promoting principle of the anterior pituitary; and the short extremities associated with a chromophobe adenoma of the anterior lobe of the pituitary all seem to point to the existence of a close relationship between the endocrines and skeletal structure. Yet there is no definite evidence that the healing process following fracture is in any way associated with any of these glands.

The Influence of General Body Conditions

It is generally agreed that the repair process following fracture is purely a local phenomenon. There seems to be no evidence supporting the view that any of the following conditions can be incriminated as a cause of nonunion: the general state of the patient's health, his age (with the exception of infancy and childhood), the existence of acute or chronic general disease, or the existence of generalized metabolic disturbances which affect bone, such as rickets, scurvy and osteomalacia. It is a common clinical observation that a patient with a negative calcium balance and with marked generalized bone decalcification shows a normal or increased rate of fracture healing, later decalcifying the callus to the same degree as the rest of the skeleton.

From the preceding evidence the following theories concerning the causes of the more frequent occurrence of nonunion in this region may be promulgated:

1. The fracture may cause the severance of the main blood supply to the head of the femur. Some authors hold that the circulation is sufficient to secure union even in these cases if they are accurately reduced and adequately immobilized.
2. The shearing action may impair circulation and callus formation. Any movement causing a shearing action at the fracture line favors the deposition of bone on the surface of the fragments, rather than across the line of fracture.
3. Changes incident to advanced age, such as osteoporosis, and fatty substitution with increase in size of Ward's triangle have been discussed. These may possibly be independent of, but are more likely intimately connected with, the vascular changes in this area.
4. In these fractures, callus is derived chiefly from the distal fragment. Here, all callus is intermediary, since there can be no bone derived from that type of periosteum which contains no cambium layer.
5. As to delayed reduction, a permanent state of nonunion usually occurs in those not reduced in approximately 30 days.
6. As to inefficient reduction, fixation and after treatment, Gaenslen[26] considers that the accurate reduction and complete immobilization is the crux of the situation, and that without them the reëstablishment of the circulation across the fracture line is impossible in most cases. Without adequate blood supply there can be no healing, and without adequate reduction and immobilization there can be no satisfactory blood supply.
7. The desire to restore function before there is firm consolidation may impair, or even cause disintegration of the reparative process.
8. The blood clot which seems to be so essential to early bone regeneration is said to be deficient in this fracture.
9. The torn capsule and certain muscles may be interposed between the fragments.
10. The synovial fluid may possibly have a deleterious action upon callus formation.

The Possible Results of an Intracapsular Fracture of the Neck of the Femur

Bone repair may be defined as the formation from neighboring cells of a new, more or less complex, permanent, and coherent tissue which takes the place of that which was lost. In discussing fractures, this tissue may be bone, cartilage or fibrous tissue. The fragments of a broken bone incapable of producing or utilizing the process of repair are eventually united by fibrous tissue, since this tissue of the lowest degree of differentiation tends to occupy every space not occupied by a more specialized growth. One may say that the main object in the treatment of fractures is to keep this ubiquitous tissue from usurping the space created by the fracture. However, in fractures involving the neck of the femur, there always looms a still more important consideration—what changes will occur in the head of the femur? Depending on this, the results of an intracapsular fracture may be: (1) Survival of the head with bony union, (2) survival of the head with nonunion, (3) necrosis of the head, partial or complete, with bony union, and (4) necrosis of the head, partial or complete, with nonunion.

An understanding of the sequence of pathology as regards each of these possibilities is of necessity based on an analysis of the healing processes involved. In turn, without the recognition that such sequences exist, there can be no well-directed efforts toward their prevention and treatment.

1. In the majority of cases, the head survives, with bony union. Shortly after the fracture occurs, necrosis of the cortex of both fragments develops for a short distance from the fracture line. Callus begins to form almost entirely within the neck; the periosteum gives no aid. The callus ossifies, and practically no deformity may remain except that which results from angulation of the fragments. The articular cartilage is not destroyed. The usual atrophy of disuse develops during the process of inactivity of the part, but with resumption of function after bony union is attained, the bone gradually increases in density. The normal density is attained in about 8 to 10 weeks. New stress lines may appear in the head to correspond with the altered lines of weight-bearing.

2. If the head survives and the fracture fails to unite, the neck fragments are gradually eroded for varying distances, and sometimes a considerable amount of the distal fragment of the neck persists.

The head and the cartilage space of the joint are preserved. If nonunion has existed for less than about 3 months, and if the head is alive, reposition of the fragments by open reduction may result in bony union in spite of marked atrophy of the fragments.

After the erosion of the neck has ceased, a cortex usually forms along the eroded surfaces, and adhesions develop between these and the capsule. As the fibrous tissue fixes the joint, there may be an increase in the weight-bearing power of the hip. It has been found at operation that a living head in case of nonunion is usually free from adhesions involving its articular surface.

3. Axhausen[27] was the first to find that bony union may occur even when the head becomes necrotic. Necrosis occurs most frequently when the fragments are impacted. The distal fragment callus extends across the fracture line, and becomes ossified in the usual way. However, as a result of weight-bearing, the head may collapse, giving a poor result. If this does not occur, the ultimate result may be fairly satisfactory, although a clinical picture simulating chronic osteoarthritis of the hip joint may remain.

4. Necrosis of the head followed by nonunion is more likely to occur if the capsule of the neck is completely torn, but this condition may occur even when much of the capsule is intact. Necrosis is not rare in the presence of impaction of fragments, or in the presence of an apparently intact ligamentum teres.

If the necrotic head fails to be secondarily vascularized by the ligamentum teres, the articular cartilage and the underlying bony lamellae undergo destruction and fragmentation. The dead bone and the dead marrow are gradually replaced by connective tissue which seems to grow from the ligamentum teres. This same tissue erodes and replaces the remaining cartilage, especially about the fovea. Later, this destructive process may take place by way of adhesions.

If a portion of the head remains alive, connective tissue grows out from its margin and invades the dead bone. It is Phemister's belief[28] that this invading connective tissue is embryonal and differentiates into bone and bone marrow. Some of the old bone is destroyed and absorbed, following which new bone gradually replaces it. Wherever this new bone appears, new bone marrow is also formed. As the new bone is much more spongy than the old bone which it has replaced, its trabeculae are sometimes left filled with marrow which gives a cystic appearance in radiographs.

In the course of a few years, if this process continues, the head may eventually consist of spongy bone with a shell of fragile articular cortex. This, together with the findings of a narrowed joint space and possibly cavity-like areas in the head, justify the roentgen opinion that a partially or completely necrotic head has undergone a certain amount of repair, opening the way for operative procedures which may result in union of the fracture and a useful limb.

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Success in using vitamin E for certain muscular diseases. Additional evidence of the value of vitamin E for the treatment of certain forms of muscular diseases, involving atrophy (shrinkage) or dystrophy (weakness without atrophy), is given in *The Journal of the American Medical Association* for June 1, 1940, by Simon Stone, M.D., Manchester, N. H., who treated fifteen such cases.

Seven of these, he says, have been treated long enough to form conclusions regarding the treatment. Their disorders were characterized by an unsteady, difficult, stumbling and waddling gait, muscular pain and weakness, deformities in some, easy fatigability and muscle shrinkage or fatty enlargement with abnormal muscle contraction.

"Definite improvement," the author declares, "was obtained in all cases with muscular dystrophy, the improvement being manifested in gain in muscle strength, the disappearance of fatigue and muscle pain on slight exertion, change in muscle texture and displacement of dystrophic musculature by normally contracting muscle tissue.

"In the cases of muscular atrophy following involvement of the nervous system, increase in amount of regeneration of muscle tissue became apparent after the addition of vitamin E (wheat germ oil) to the vitamin B complex the patients were receiving.

"The response to treatment is usually prompt. At first improvement in appetite is noted, then disappearance of pain on exertion, followed by greater resistance to fatigue and lastly replacement of 'rubbery' muscles by normal muscle tissue."

THIRD ANNUAL REPORT OF THE DIABETIC CAMP FOR CHILDREN

K. Hammond Mish, M.D., *In Charge of the Diabetic Outpatient Clinic, Garfield Memorial Hospital;* Samuel Benjamin, M.D., *In Charge of the Diabetic Outpatient Clinic, Georgetown University Hospital;* Benjamin Manchester, M.D., *Clinical Instructor in Medicine, George Washington University School of Medicine;* E. Clarence Rice, M.D., F.A.C.P., *Pathologist, Children's Hospital;* and Leila Hulbert, *Junior Medical Student, George Washington University School of Medicine*

The third annual diabetic camp for children was operated at the Christ Child Society Farm for Convalescent Children, Rockville, Maryland, during the month of August 1939. Seven children ranging in age from 4 to 14 years were in attendance.

TABLE 1

Salient Data of the Seven Diabetic Children at the Camp

NAME	AGE	SEX	NO. DAYS AT CAMP	WEIGHT		INSULIN DOSAGE ON ADMISSION		INSULIN DOSAGE ON DISCHARGE		DIET ON ADMISSION			DIET ON DISCHARGE			REACTIONS	COMPLICATION
				Admission	Discharge	Protamine zinc	Unmodified or crystalline	Protamine zinc	Unmodified or crystalline	Carbohydrate	Protein	Fat	Carbohydrate	Protein	Fat	1+, mild 2+, moderate 3+, semicoma 4+, comatose	
S. B.		F	55	72.25	80.50	60	20	43	10	180	70	100	190	70	100	Several 1+	Mild gastroenteritis for 2 days
B. S.	12	M	31	78.00	81.75	46	50	38	10	176	85	106	176	85	106	Many 2+ Several 3+	Mild gastroenteritis for 2 days
B. L.	13	M	31	81.25	86.25	22	22	26	30	221	91	132	221	91	132	None	Mild pharyngitis 1 day
B. M.	4	M	31	38.25	40.00	0	0	0	0	131	60	81	122	45	67	None	None
H. R.	14	F	27	90.50	96.50	60	45	60	45	183	90	105	183	90	105	Several 1+	Mild gastroenteritis for 2 days
F. F.		F	18	83.25	87.50	56	44	56	24	177	87	114	177	87	114	None	Mild gastroenteritis for 2 days. Head cold for several days
B. F.	7	M	6	43.25	45.25	25	0	25	0	140	40	80	140	40	80	None	None
Average			28	70	74	38	26	35	17	173	75	103	173	73	101		

In addition to the regular personnel of the Farm, one third-year medical student was employed as councilor, and much of the routine diabetic care of the children, such as the weighing of food, urinalysis, injection of insulin, keeping of the diabetic records and general supervision of the activities of the diabetic children, was placed in her hands. The other authors supervised the diabetic treatment of the children, making three or more visits to the Farm each week.

The results of treatment at the diabetic camp are summarized in the accompanying table.

All 7 of the patients showed a gain in weight during their stay, varying from 1.75 to 8.25 pounds. The average weight gain was 4.43 pounds. Four of the patients gained in height during the time they were in camp, 2 showing an increase of 0.75 and the others 0.50 inches.

All of the patients except 1 received protamine zinc insulin, this one being controlled by dietary measures alone. Of the 6 children receiving protamine zinc insulin, 5 received supplemental doses of unmodified or crystalline insulin. For

3 patients the insulin requirements were decreased during the period of observation. This decrease varied from 20 to 48 units. For 2 children the insulin requirements remained the same, and for only 1 child was an increase necessary, this amounting to 12 units.

The diet on admission and discharge remained the same throughout the camp period, with the exception of 2 children, for 1 of whom the carbohydrate was increased 10 grams, and for another a reduction of 9 grams of carbohydrate, 15 grams of protein, and 14 grams of fat. In the latter patient, the change was made on the day after admission, due to the fact that it was considered that this child came to the camp on a diet that exceeded his requirements.

Three of the children experienced insulin reactions on several occasions. In 2, these reactions were mild in nature; in the third there were a number of moderate severity, and on a few occasions the patient was rendered semicomatose.

The reduction in the number of insulin reactions this year, as compared with the two preceding camp periods in 1937 and 1938, illustrates the fact that as a better understanding of the administration of protamine zinc insulin and unmodified or crystalline insulin is obtained, there is a corresponding reduction in the number of insulin reactions experienced by the patients.

In comparison to the first camp period, when all of those who received more than 5 units of protamine zinc insulin were subject to numerous moderate and severe reactions, this year but 1 child experienced these types of reactions.

Other than for the usual run of cuts and bruises experienced by active children, the only complications consisted of a mild gastroenteritis of 2 days' duration that affected 4 of the children, 1 head cold and 1 attack of mild pharyngitis that cleared up in 24 hours.

The 7 children attending the 1939 camp represent an increase of 2 over the 1937 and 1938 camp periods. On the basis of questionnaires sent out by various groups here and in other cities, it is estimated that there are probably fewer than 100 known white diabetic patients under 16 years of age in Washington and vicinity. It would appear that a fair proportion of the white underprivileged juvenile diabetics was given the advantages of a diabetic camp this summer.

Subcutaneous injection of sulfapyridine solution has many advantages. Injections under the skin of sodium sulfapyridine dissolved in a sodium chloride (common salt) solution should be used when nausea or vomiting renders difficult the administration of the drug by mouth, when it is poorly absorbed into the blood stream from the stomach and intestinal tract or when a high sustained concentration of the drug in the blood is imperative, GEORGE V. TAPLIN, M.D., RALPH F. JACOX, M.D., AND JOE W. HOWLAND, M.D., Rochester, N. Y., advise in *The Journal of the American Medical Association* for May 4, 1940.

The authors successfully injected the sodium sulfapyridine solution into the thighs or under the breasts of more than fifty patients with pneumonia and numerous other conditions in which administration of sulfapyridine by mouth was difficult or impossible.

The advantages of injections under the skin over administration of the drug by mouth, the three doctors say, are that there is no question about absorption, especially when vomiting is present; a high concentration in the blood can be reached within a few hours and maintained for eighteen to thirty-six hours; the requirement of sodium chloride or common salt is supplied at the same time, whereas many patients dislike taking salt by mouth; the fluid intake is supplemented, thus overcoming the difficulty of maintaining the fluid intake at necessary levels because of nausea and vomiting encountered in many cases in which sulfapyridine is given orally. They say also that smaller doses are generally required.

The advantages of injections under the skin over those into the vein involve the lack of danger of local reactions, effective concentration in the blood being maintained for a longer time—twenty-four hours as compared with about twelve hours, and a simpler and widely applicable technic of administration.

Regarding poisonous reactions, the authors report they have noted no appreciable difference in their incidence. "There were not sufficient cases in which the sodium sulfapyridine was used alone to evaluate its efficacy as compared with serum or sulfapyridine by mouth," they say, "but the general impression was that the sodium sulfapyridine given hypodermically was equal in effectiveness to oral sulfapyridine, and as a rule smaller amounts were required to cure the patient."

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THE ROAD AHEAD

People in this country today are undergoing an ordeal such as they have not experienced since the early days of the Republic. They are discovering that contrary to what was believed only a few months ago, the United States is not impregnable in the face of world disaster. In fact, our very security is being threatened.

It is not surprising then that virtually overnight our way of thinking has changed. Things that seemed so important only yesterday are now of little moment. Tasks which have been such a vital part of our lives have become insignificant. Controversies that have troubled us are not worth thinking about. For what matter these things if our way of life is destroyed?

The question also arises—have we the character, the ingenuity, and the courage to maintain our democracy? There are many—and they are articulate—who are not so sure. Facts, they say, justify the belief that life in this country as we have known it cannot survive. Who are these prophets of disaster? Certainly not all of them are "fifth columnists," foreign agents or propagandists for radical minority groups. Surprisingly, we find among them important and undoubtedly loyal citizens. No one can question their sincerity. But where is their vaunted American spirit? Without any wish to minimize the seriousness of our present situation, this is no time for such pessimism as has been witnessed in recent weeks.

Physicians have an opportunity in this crisis to demonstrate that they have cool heads and stout hearts. It should, therefore, prove profitable to consider how they can now best serve their country.

Their primary obligation is to provide the best medical care of which they are capable. Beyond this they must seek to improve themselves, for the science of medicine is making rapid strides. Physicians who lag in knowledge and skill not only reflect upon those who keep abreast of the times, but fail in their public responsibility.

They will, as they have always done in the past, support the government. As these lines are being written, Europe is in such a chaotic state that no one knows what will happen. One thing is clear. We must prepare to defend our country. In this eventuality, the medical profession will respond with all its resources. If there is no war, physicians will support health measures which they conscientiously believe to be in the public interest. However, partisan politics must be banished from the health field if the profession is to be of the greatest service.

Finally, physicians must demonstrate their loyalty to the units of organized medicine of which they are members. Repeatedly in these columns, the need for unity and active interest on the part of members has been emphasized. There are still too many physicians who are indifferent. In these times, medical societies cannot afford the luxury of having nominal members on their rolls. There is too much at stake. For, as was stated in an editorial which appeared in the Medical Annals last month, the task ahead is not one for leaders in medicine alone but for the rank and file. Decisions which are made should represent the will of the majority and should have the support of all. Unless there is a general awakening to the truth of this statement, the medical profession may find itself in a situation which will be the lot of all disorganized groups.

If physicians meet these obligations, they can go forward with assurance that come what may, they will do their part well.

SUPREME COURT DENIES CERTIORARI

On April 29, 1940 the American Medical Association, The Medical Society of the District of Columbia, Harris County Medical Society, Washington Academy of Surgery, and the twenty-one individual physician defendants filed in the Supreme Court of the United States a Petition for a Writ of Certiorari seeking a review of the decision of the Court of Appeals which reversed the action of Justice Proctor in dismissing the indictment returned by a grand jury charging a violation of Section 3 of the Sherman Anti-trust Act.

As the opinion of the Court of Appeals was concededly new and extended the hitherto defined "commercial" and "industrial" scope of the Anti-trust Act to include all occupations of the citizen, including the professions, a review by the Supreme Court was rather to be expected.

The opinion of the Court of Appeals was sweeping in terms and basicly unsupported by any decision or authority in the jurisprudence of this country.

On May 27, 1940 the Supreme Court handed down a "new" interpretation of the Sherman Act in the case of Apex Hosiery Co. v. Leader and held the Sherman Act was not designed to police commercial or industrial disputes even though restraints were thereby inflicted. The restraint to be within the Act must operate to fix prices or suppress competition, the Court decided.

The defendants in the medical case are not charged with either the suppression of competition or the fixing of prices.

The Apex decision seemed to present cogent reasons for the Supreme Court to review the decision in the medical case. Yet on June 3, 1940 the Supreme Court denied the writ requested on April 29, 1940. In other words, they refused to order the record sent to them, that they might review the decision of the Court of Appeals.

This refusal makes the decision of the Court of Appeals the law of the case. A mandate will go down from that Court to the District Court reversing Justice Proctor and remanding the case for further proceedings.

The result will be an early trial on the merits in the District Court. A jury must now hear evidence and decide the issues involved, if the Government can support the allegations and conclusions of the indictment by competent evidence. Whether this can be done remains for the future to answer.

The present decision, of course, does not preclude the right of appeal, if there be any questions to settle after the trial.

ON ADDRESSING THE PUBLIC

The Medical Society's Speakers' Bureau is enjoying the most successful year in its history. Letters have been received from a number of groups before whom speakers have appeared, expressing satisfaction with the manner in which subjects have been presented and appreciation for the service being rendered the community by the Bureau.

Although the Bureau has a number of physicians on its roster, more volunteers are needed. Members need not hesitate to list themselves with the Bureau because they have not spoken to lay audiences or because they do not wish to devote the time necessary to preparing a talk. Material is available through the Society's office and the American Medical Association's Bureau of Health Education which will simplify their task. The manner in which the latter assists the physicians who plan to address lay audiences is described in an article by Dr. Paul A. Teschner,[1] Assistant Director of the Bureau, entitled, "When Doctors Address the Public." The following is an excerpt:

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[1] Teschner, Paul A.: Doctors and Public Speaking, A. M. A. Bull., 1936, **31**, 131.

> Few practicing physicians have had time to become polished platform orators. Many a potentially able speaker hesitates to accept an invitation to speak to a lay group, not from timidity but chiefly because of the fear of being unable to speak the language of his audience. He may even have had an unfortunate experience when he delivered an excellent paper on some medical subject only to lose his audience because the paper was more suited to a medical society than a Parent-Teacher Association or woman's club group. One such experience causes the physician either to refuse all similar invitations or to seek aid in preparing future addresses.
>
> For several years the American Medical Association through the Bureau of Health Education (formerly the Bureau of Health and Public Instruction) has prepared material that can be used by the prospective speaker. "The Bureau has collected clippings from *Hygeia*, the Health Magazine, on many phases of health. These clipping collections are available to any one preparing a paper or address on health for a lay audience. Only one collection may be borrowed at a time and it must be returned within ten days mailed flat. A return envelope will be furnished, on the flap of which will be penciled the amount of postage required to mail the material back to us. Collections should be ordered by number and a second and third choice of subjects indicated. We will endeavor to send your first choice, but it may not be possible, owing to the great demand for these collections and the limited number available on a given subject. Your coöperation in returning this material promptly will be appreciated."[2]
>
> These loan collections of *Hygeia* material, patterned after the American Medical Association Package Library, have been in great demand during the past year. In some instances five or more collections on a single topic have proved insufficient for the demand. For this reason, physicians are asked to name a second and a third choice of topics. It is also advisable to present requests fourteen days in advance of the specified meeting.
>
> Accompanying almost every collection of *Hygeia* clippings is a "Speaker's Outline" which need not be returned. This outline is not intended as a fixed pattern which the speaker must follow but as a suggestion or illustration of one way of presenting the subject. As the physician reads the material he can make his own notes on the outline, embellishing some parts with local illustrations or deleting others not appropriate to the community.

A list of topics on which loan collections are available can be obtained by calling the Society's office. They cover nearly every subject on which the physician is invited to speak. Requests for loan collections should be addressed to the Bureau of Health Education, American Medical Association, 535 North Dearborn Street, Chicago, Illinois.

Dr. W. W. Bauer, Director of the Bureau of Health Education, was in Washington recently. He stated that loan collections were in great demand and requests should be made well in advance of the dates on which talks are to be given.

PROFESSIONAL GROUPS JOIN FORCES

The desirability of some arrangement affording representatives of professional groups in the health field an opportunity to meet and exchange views on problems of mutual interest has long been recognized. Recently, the Medical Society voted to create liaison committees with the dental, pharmaceutical and legal professions. Although the latter is not strictly engaged in the health field, many of its interests touch upon it. Legislation relating to health is often of vital interest to the legal profession, and much could be gained by discussion.

Credit for initiating this undertaking in Washington is due the District of Columbia Pharmaceutical Association. Some weeks ago, representatives of that group made the proposal to the Society that joint committees representing the dental and pharmaceutical professions be created. Following the Society's approval, appointments were made by President Lyons to Committees on Relations with the Dental, Pharmaceutical and Legal Professions. The personnel of these committees appear elsewhere in this issue of the MEDICAL ANNALS.

Consideration might well be given to the inclusion of other groups. For example, a committee should be established to coöperate with the Graduate Nurses' Association. Voluntary health organizations should also be included.

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[2] Loan Collections of Hygeia Material, mimeographed article, Bureau of Health Education, A. M. A.

If organizations agreeing to coöperate devote the necessary thought and time to matters brought to their attention, worthwhile benefits will accrue not only to themselves but to the people they serve.

PERTINENT PARAGRAPHS

May Meetings

Despite the fact that meetings of the Society were discontinued following a scientific session on May 15 until next Fall, the Society's board and committees are still active. The following meetings were held during the month of May.

May 1	Annual Business Meeting of the Society
May 2	Section on Neurology and Psychiatry
May 6	Board of Censors
May 8	Scientific Meeting of the Society
May 10	Subcommittee on Finance for the Annual Scientific Assembly
May 13	Board of Censors
May 14	Subcommittee on Banquet, Luncheon and Entertainment for the Annual Scientific Assembly
May 15	Scientific Meeting of the Society
May 17	Committee on Public Health
May 20	Obstetrical Board
May 21	Grievance Committee
May 25	Section on Pathology and Laboratory Medicine
May 27	Executive Board
May 28	Committee on Industrial Medicine Committee on Public Health and Subcommittee on Mental Health
May 29	Subcommittee on Attendance for the Annual Scientific Assembly Committee on Arrangements for the Annual Scientific Assembly.

Public Officials on Record

To persons without legal training or experience in legislative matters, bills introduced in the Congress are dull and laborious reading. It is, therefore, not surprising that physicians rely upon others for an analysis of them.

Much more warmth and enlightenment is to be found in the record of hearings on bills. One cannot read the testimony given before the Subcommittee on Education and Labor at hearings on the Hospital Bill (S. 3230) without a better understanding of the personalities who are concerned with this legislation and their ultimate objectives.

An example is the colloquy between Dr. Thomas Parran, Surgeon General of the United States Public Health Service, and Senator James E. Murray of Montana. At one point in the hearing, Senator Murray commented upon the construction of hospitals by saying:

> "I understand that this is not to be regarded as a very ambitious undertaking, but is more in the nature of an experiment and would very likely be swallowed up in a national health measure when we finally come to enact a general national health program?"

Dr. Parran raplied:

> "This is frankly an experiment on a comparatively modest scale. If and when a complete national health program is enacted, it seems to me that this bill would be an integral part, would fit into, very definitely into, the whole national health program, as regards the providing of hospital facilities for rural and economically depressed areas."

These few lines show clearly what these gentlemen have in mind. There were other equally illuminating passages in the testimony.

Copies of hearings on important legislation are obtainable in printed form. They are recommended to physicians as amusing, enlightening and profitable reading.

War Relief Fund

An appeal has been directed to members of the Medical Society by Dr. Montgomery Blair, Jr., Chairman of the Medical Group for the District of Columbia Chapter of the American Red Cross, for contributions to the War Relief Fund. Physicians need not be told that money is badly needed to help the homeless, starving and wounded victims of the war. More than five million hungry and homeless women, children and old men are desperately in need of help. Members are urged to contribute as much as they can to this worthy cause.

Monthly Bulletins

In accordance with the provisions of the recently adopted amendment to the Society's Constitution and By-laws, three business meetings will be held in the coming year. As it is extremely important that the membership be kept informed in regard to the Society's activities and current happenings in the District of Columbia relating to health, it was suggested to the Executive Board by the Secretary that monthly bulletins be issued. These it was proposed shall be of a more informal nature than material published in the MEDICAL ANNALS so that members will be kept up to date on recent developments.

The Board approved the Secretary's proposal. The first issue will make its appearance early in the fall, possibly September or October, and monthly thereafter. Continuance of the bulletins will depend upon how favorably they are received by the membership. Comments on them will be welcomed by officers of the Society.

A Unique Hobby

The Subcommittee on Woman's Auxiliary Liaison and Hobby Show is discovering that physicians have many unique hobbies. None is more unusual than that of Dr. John H. Trinder. Dr. Trinder's hobby is that of restoring paintings and refinishing frames in which they are mounted. An example of his fine workmanship will be found in the Society's office where a painting, which has been completely restored by Dr. Trinder, now hangs. Two other paintings have been turned over to him for restoration.

The Society is not only indebted to Dr. Trinder but it is fortunate in having a member with such a useful hobby. His work will be on display at the Hobby Show to be held in connection with the 1940 Annual Scientific Assembly.

1940 Annual Scientific Assembly

Reports submitted by subcommittees at a meeting of the Committee on Arrangements held on May 29 indicate that plans for the 1940 Annual Scientific Assembly are well advanced.

One of the finest scientific programs ever sponsored by the Society is complete except for one out-of-town speaker. Those present when this report was made were highly elated with the type of papers to be given in connection with the Postgraduate Course in Cardiovascular-renal Disease and the eminence of many of the speakers who have agreed to participate.

Numerous applications have been received by the Subcommittee on Scientific and Public Health Exhibits indicating that those who attend the Assembly may anticipate exceedingly fine exhibits. The space in the Technical Exhibit has been sold for some time. The entire Promenade at the Mayflower will therefore be occupied.

In a month or so, preliminary programs will be mailed to physicians in Washington and nearby states. It is expected that a large number of out-of-town practitioners will register this year.

Communicable Disease Code

Although reports which appeared in the press would indicate that a controversy had arisen between the Medical Society and the District of Columbia Health Department regarding the recently proposed communicable disease code, the facts are that no dispute exists. The Committee on Public Health is studying the code and has suggested that conferences be held by representatives of the District of Columbia Health Department and the Committee for the purpose of discussing details in connection with the code.

The Society's Public Health and Legislative Committees approved a draft of a bill revising the communicable disease code submitted to it by the District Health Officer on November 17, 1938. Their recommendations were transmitted to the Executive Board and then to the Society, which gave its approval. The District Health Officer was notified of the Society's action on February 10, 1939.

Under date of May 24, 1939, the Society was informed that the Corporation Counsel had advised against the submission of such a bill on the grounds that it would be too specific and that the passage of a basic law empowering the Commissioners of the District of Columbia "to make regulations and control the spread of communicable and preventable diseases" was preferable. This legislative proposal (S. 2745) was introduced in Congress on July 5, 1939 and later became a law. Among its provisions is the following: ". . . this Act shall take effect from and after ninety days after its passage and approval and from and after the expiration of said period the following Acts are hereby repealed." There follows a number of laws then in effect relating to the control of contagious and infectious diseases.

Upon instruction of the Health Officer, a new communicable disease code has been drafted. This is the code which is now being studied by the Committee on Public Health and on which action has not yet been taken.

Rest Homes to Be Licensed

Some weeks ago, the Society's views in regard to the licensing of private homes now being used for the care of the sick was sought by the District Health Officer. This matter received the attention of the Subcommittee on Sanitation which agreed with the proposal made by the Health Officer that "the (District Health) Department will regard any place that houses for a monetary consideration, three or more, not next of kin, under the supervision and care of persons licensed to practice the healing art, as a hospital." However, the Subcommittee recommended that judgment should be exercised in the enforcement of this ruling so as not to make it impossible for people of very limited means to obtain convalescent care. It recommended further that a study of the situation relating to convalescent homes be made by the District Health Officer. The Committee on Public Health and the Executive Board concurred in the Subcommittee's recommendations.

"The Case for Private Medicine"

An article entitled, "The Case for Private Medicine," appeared in *Nation's Business* for May. It reviews in considerable detail the medical profession's fight to maintain private practice.

In view of the public interest in medical care, the article is receiving a great deal of attention. Wide circulation is also being given a pamphlet, "Health by Political Decree," also prepared for *Nation's Business*. Merle Thorpe, editor of the publication, states, "If the people understand the danger facing private medicine, they can be counted on to act appropriately."

Reprints of "The Case for Private Medicine" can be obtained by members at a cost of 10 cents per copy by addressing *Nation's Business*, Washington, D. C.

Work on Telephone Exchange Continues

The Medical Bureau Committee is continuing its work in connection with the establishment of the Medical Bureau, a 24-hour telephone exchange at the Society's building. A communication describing the Bureau is again going forward to all members of the Society, together with contracts for service. Those who are interested should return their contracts promptly.

A majority of the members who signed up prior to the issuance of the recent telephone directory have indicated their desire to participate despite the delay. Not a few are very enthusiastic about this project and feel with the officers of the Society that it is an undertaking which will benefit not only the physicians who subscribe, but the general public as well.

It is planned to inaugurate the Bureau service with the next issue of the telephone directory.

Invitation Extended Society Members

The West Virginia and Virginia State Medical Associations will meet jointly at The Greenbrier, White Sulphur Springs, West Virginia, July 29–31. A cordial invitation has been extended to members of this Society to attend any or all of the sessions.

Guest speakers include Dr. Ralph M. Tyson, Philadelphia, on Pediatrics; Dr. George E. Bennett, Baltimore, on Orthopedics; Dr. Ross Golden, New York, on Radiology; Dr. Walter Alvarez, Rochester, on Internal Medicine; Dr. Wesley C. Bowers, New York, on Eye, Ear, Nose and Throat; Dr. A. I. Folsom, Dallas, Texas, on Urology; Dr. Harvey B. Stone, Baltimore, on Surgery; Dr. Karl M. Bowman, New York, on Neuro-Psychiatry; Dr. Frederick C. Irving, Boston, on Obstetrics; Dr. Irvin Abell, Louisville, on Surgery; and Dr. Paul White, Boston, on Internal Medicine.

The Convention Golf Tournament will be held on Sunday, July 28; the Annual Banquet on Wednesday evening, July 31, at The Greenbrier.

The medical profession of the District of Columbia will undoubtedly be well represented at this meeting. Members who have not made plans to attend should note the dates now on their calendar pads.

HEALTH SECURITY ADMINISTRATION—HOW IT FUNCTIONS

Ross Garrett, *Administrator, H. S. A.*

Editor's Note: In 1938 the Health Security Administration absorbed two agencies known as the Central Admitting Bureau and the Medical-Dental Service Bureau. These bureaus were established by the Medical Society of the District of Columbia, which also sponsors the Health Security Administration.

There are a number of physicians who are not familiar with the manner in which the Administration operates. Mr. Garrett was therefore requested to prepare the following article describing its functions and what it has accomplished. Members desiring additional information should communicate directly with Mr. Garrett.

What is the Health Security Administration and how does it serve the medical profession and laymen in the District of Columbia?

Antedating by several years "the platform of the American Medical Association," Health Security Administration embodies tenets laid down by that body and carries into actual practice theories advanced by the official spokesmen of the medical profession.

This sturdy, growing organization presents an arresting answer to that and to other health questions. In its record of accomplishment lies proof that the individual community can provide for the health needs of its residents, and that planned coördination of facilities will do much to meet these needs. Any health plan is unsound until it takes into consideration all existing facilities for medical service and integrates them into a rounded whole. This was the conviction on which Health Security Administration was founded.

It is now five years since the Administration began its efforts to bring to the needy sick whatever care they were without, regardless of ability to pay, and to assist doctors to serve the medically indigent without fear of exploitation. During this period, some 150,000 people have passed through the doors of Health Security Administration bringing medical problems for which they themselves had no solution. They needed treatment for colds. They needed major operations. They needed services from a specialist for which they could pay a small fee but not the usual charge for a private patient. They needed prenatal care and the safety of hospital delivery. They needed glasses, artificial legs, convalescent care. Great and small, simple and complex, their problems were brought to the Administration.

At the same time, hundreds of requests have been received from physicians faced with failure in therapy because of circumstances over which they or their patients had no control. Perhaps the patient's lack was a wheel chair, a bed rest, a housekeeping nurse, an orthopedic appliance, an imported drug—all things the physician could not supply and which the patient was unable to secure for himself, but which were vitally necessary to recovery. Because it is a flexible, fluid organization adapting its resources to any need, the Administration has been able to meet these demands. The Administration is in fact a central bureau from which ever-open lines lead to the community's storehouses of health facilities.

Insofar as its structure is concerned, Health Security Administration has perhaps the simplest health set-up in Washington. The physician who asks its assistance is given prompt, decisive service that cuts through red tape and brings quick action. The organization has established a five-year record of acceptance by the medical profession that the gift of physicians' services is not abused, and that its rating of financial status of patients is equitable.

Through its social service department, the Administration can quickly establish the financial condition of an applicant informing the interested physician of the circumstances to be met in working out a plan of medical care. Because of efficient coördination of sources of information, this requires but a few minutes. Facts that would be entirely unavailable to the doctor as an individual are readily obtained by the Administration. Its own files now include verified histories equivalent to one in every thirteen residents in Greater Washington. The Administration can provide a much higher percentage of cross references by families.

Invaluable protection is given the physician through this system of rating. No hard and fast rules are followed by Administration counselors in determining financial responsibility, each case being considered individually and in the light of all circumstances. Any physician who consults the organization may be sure that the information he receives is the result of careful weighing of the patient's need, his responsibilities, and his resources. Uniformly the medical profession has coöperated with the Administration and accepts its counselors' recommendations.

No physician knowingly makes a charge that will disrupt a family's economy for years to come, yet many patients hesitate to discuss financial arrangements with a doctor. Hundreds of such cases are handled each year by the Administration's counselors who after conference with the applicant, are able to talk over the fee with the doctor. Almost without exception, the physician's answer is, "Set the fee as what you think is right. I'm content with anything you do."

This confidence of the medical profession is something that the Administration has earned by painstaking research and careful administration. Always keeping in mind available resources, its aim is to work out the best plan for the patient and the physician, assuring the former that he is receiving the best possible care and the latter that his services are justly used.

Affiliated with the Health Security Administration group are all private hospital health center clinics in the District. Situated at Children's, Columbia Hospital for Women, Central Dispensary and Emergency Hospital, Episcopal, Garfield, Georgetown University, George Washington University and Providence hospitals, these health centers are the city's great bulwarks against disease. They provide complete health service, bringing to Washingtonians the greatest advances of modern medicine. In their specializing and general clinics, these health centers can and do offer services in every branch of medical knowledge. Common and obscure ills alike are diagnosed and treated, and disease prevention practiced.

Into these health centers every day come several hundreds of Washington's foremost physicians, all of them giving their time and their knowledge without thought of compensation. More than $3,500,000 worth of care has flowed through these channels to the needy sick.

While the bulk of the Administration's dealings are with the very low income groups, not all applicants are eligible for free care. For them, the Administration purchases services from physicians and dentists. In 1939 doctors were paid $15,214 for the care given this group of people. It must be kept in mind that these were patients who through adjustment of fees to resources were classed a step above the indigent. Although not eligible to free medical services, they would in all likelihood be recorded in the physician's books as "bad debts" if they had been under private care.

In the years 1937, 1938 and 1939, there were issued 121,787 clinic passes by the Health Security Administration to people unable to purchase care from a private physician. Authorized by these passes, 840,713 visits were made to private hospital health centers. In few communities can the medical profession be sure that such a vast amount of care is given where it is needed, without danger of exploitation or diversion to recipients well able but unwilling to pay for the services of a private doctor.

In the same length of time, the Administration authorized hospitalization of 24,280 patients requiring bed care in its affiliated hospitals. Here, again the city's physicians made a huge gift to the medically indigent. These patients received 277,837$\frac{5}{8}$ adult and child and 46,166 newborn days' care in hospitals, each day entailing consultations by staff physicians and interns. To this vast number of persons, surgeons gave the skill in delicate operations; internists gave their knowledge to readjust malfunctioning bodies; and obstetricians delivered 4,487 infants under the safely aseptic conditions of modern delivery rooms. All this was done without professional fee entirely upon the certification by the Administration that the recipients were eligible for medical care.

During the past year, the Administration acted as consultant and administrative agent in the Medical Society's Medical Guide plan, through which medical care is provided workers at the Washington Self-Help Exchange and Goodwill Industries. Experimentally begun to foster the spirit of medical counseling that has existed between the family physician and his patient, the Medical Guide plan has been eminently successful.

A committee of the Medical Society of the District of Columbia headed by Dr. Thomas Mattingly and the Health Security Administration worked out details of the Medical Guide plan. A medical social counselor from the Administration staff was assigned to work with the Medical Society's representatives, and a schedule of regular visits was worked out whereby participants in the two centers might consult selected physicians in the relationship of patient to private practitioner. The same physician who first saw the patient followed him through all necessary treatment as a family physician would have done.

The plan was put into effect in the fall of 1939 and has worked to the entire satisfaction of the doctors, the Medical Society, and the patients. It has succeeded in building a closer bond of interest between physician and patient, which has been to the advantage of both in prolonged treatment. The physician works under conditions similar to those in his own office, and has expert assistance in handling his patients. He also has the advantage of being able to draw upon a special fund, set up for Self-Help Exchange patients and administered by the Health Security Administration, to provide special drugs, dentures, and other items prescribed.

Since the beginning of 1936 there has been marked decrease in the infant and maternal death rate in the District of Columbia. In that year the infant mortality rate was 72 per 1,000 live births, the maternal rate 69. Last year both reached a low of 48. These figures gain interest when compared with the Administration's statistics showing the increase of prenatal and postnatal visits made to private hospital centers and the number of hospital deliveries arranged in the Administration's affiliated private hospitals.

During 1939, 15,250 clinic visits were made for prenatal and postnatal care, an increase of 2,000 over the previous year. Days' care for newborn infants rose from 15,275 in 1938 to nearly 17,500 in 1939. Maternal days' care in hospitals showed a corresponding increase.

It is almost impossible to estimate the value to the community and to future generations in health, in usefulness, in economic and social stability of this increasing volume of service by which the medical profession cuts present death rates and guarantees the infant population its birthright of a safe, healthy beginning of life.

The importance of the Administration's relationship to community life and to the medical profession may be seen in a brief statistical summary of accomplishment in 1939. During that year the organization secured 96,624 hospital bed days' care for adult and child patients, and an additional 17,436 for newborn infants. Its certified applicants received 289,726 clinical diagnoses and treatments in private hospital health centers for which all doctors' services were given without fee. Sharing in that gift were 40,785 medically indigent persons not ill enough to require bed care.

Health Security Administration is maintained as administrator and trustee of private philanthropic as well as some tax funds to purchase medical care. The sources of funds which it disburses are: the Washington Community Chest Hospitalization Fund; payments from marginal income or catastrophic illness patients able to pay only by adjustment of total expense and through budgeted payments; payments from medically indigent patients able to contribute something over a period of time to replenish the Administration's Hospitalization Fund; payments from insurance companies, beneficiaries or insurance policies, pensions, and people responsible for patients; payments from Fairfax, Va., Community Chest Hospitalization Fund; payments from Fairfax, Va., Board of Public Welfare Hospitalization Fund; and payments from organizations setting up special funds for "gap-filling" purposes.

NEWS AND PERSONALS

The Abbott Laboratories, North Chicago, Illinois, has established fellowships in several universities for the academic year 1940–41 with a view to providing means for carrying on additional scientific work in American universities. The fellowships carry stipends of $650 per year and will be available to graduate students in the last or next to last year of graduate work leading to the doctorate degree. The recipients, who are to be selected by the university in which their work is being done, are not limited as to the subjects on which they will work. Grants will be made to the following universities: in organic chemistry—Cornell, Harvard, Illinois and Michigan; in biochemistry—California, Columbia and Cornell.

The Conference of State and Provincial Health Authorities of North America adopted the following resolution at their meeting May 11, 1940:

"*Whereas:* The Medical Society of the District of Columbia has so graciously provided the meeting place for the Conference of State and Provincial Health Authorities of North America for its Executive Session this Eleventh Day of May, 1940,

"*Therefore Be It Resolved* by the Conference of State and Provincial Health Authorities of North America that its greatest appreciation of this courtesy be extended to that society through its President, Dr. John H. Lyons, by the Secretary of the Conference.

Several **new committees** have been created recently, and changes in personnel have occurred in others. New committees are as follows:

Obituary Committee—Dr. Thomas S. Lee, *Chairman;* Drs. Stuart O. Foster, Frank M. Hand, Edward Lewis and Richard J. McNulty.

Committee on Relations with the Legal Profession—Dr. Don Johnson, *Chairman;* Drs. Linn F. Cooper and Russell K. Hollingsworth.

Committee on Relations with the Dental and Pharmaceutical Professions—Dr. Lyman B. Tibbets, *Chairman;* Drs. Thomas Bradley and Edward B. Kelly.

The following members have been added to the Medical Bureau Committee: Drs. Norvell Belt, William F. Burdick, Allen S. Cross and Herman S. Hoffman.

Dr. Fred A. Moss has been appointed to the Committee on Automobile Accidents in place of Dr. Antoine Schneider, who recently resigned.

Dr. Ruth Jackson will represent the Society on a joint Civil Service Committee with the District of Columbia Chapter of the American Institute of Chemists and other local organizations.

The Washington Medical and Surgical Society held its 43rd annual dinner at the Mayflower Hotel, May 11. Mr. John Jay Daly of the *Washington Evening Star* addressed the group on the subject, "The European Situation." Fellowship certificates, which are awarded to doctors who have been active members of the society for ten years, were presented to Dr. Tomas Cajigas, Dr. Joseph F. Elward, Dr. Joseph Horgan and Dr. Robert Oden. Guests of honor included Dr. Castilla Najera, Ambassador of Mexico; Dr. Ross P. McIntire, Surgeon-General, U. S. Navy; Captain George Calver, Medical Corps, U. S. Navy; Father David V. McCauley, Dean, Georgetown University School of Medicine; Dr. Walter A. Bloedorn, Dean, George Washington

University School of Medicine; Dr. John H. Lyons, President, Medical Society of the District of Columbia; Dr. Daniel L. Borden and Dr. Henry R. Schreiber, Presidents-Elect of the Medical Society; Dr. George Ruhland, Health Officer, District of Columbia; and Mr. Theodore Wiprud, Secretary of the Medical Society. Dr. Beveridge Miller, President of the society, presided at the banquet.

The George Washington University Medical Society has elected the following officers for 1940–41:

Dr. William B. King, *President;* Dr. Howard F. Kane, *President-Elect;* Dr. J. Burton Glenn, *First Vice President;* Dr. Katharine A. Chapman, *Second Vice President;* Dr. Leslie H. French, *Secretary-Treasurer.*

Dr. Arnold McNitt, retiring president, was elected Counselor of the society for a term of five years.

The Jacobi Society held election of officers May 20. The following members will serve in official capacity during the ensuing year:

Dr. Isadore Rodis, *President;* Dr. Samuel M. Dodek, *Vice President;* Dr. Joseph Dessoff, *Secretary;* Dr. Joel N. Novick, *Treasurer.*

The White Memorial Eye Operating Room, a gift to Emergency Hospital from Mrs. Louise C. White in memory of her husband, George Whitney White, was dedicated on May 17. The presentation was made by Dr. James N. Greear, Jr., Chief of the Ophthalmic service at the hospital on behalf of Mrs. White. Major Gist Blair, President of the Hospital Board, accepted the gift.

Mr. White was a member of the Board of Directors of Emergency Hospital from 1910 until his death in 1938, and also served as treasurer of the institution for 17 years. Major Blair paid tribute to Mr. White, as did Dr. William B. Marbury of the surgical staff of the Hospital. The new room contains the most modern eye operating equipment available in this country.

The Fauquier County Hospital Association of Warrenton, Virginia, in a special meeting May 22 voted to dissolve the Association and to discontinue operation of the hospital at once. The closing of the hospital will necessitate selling the land, buildings and equipment to pay the debts. An individual has promised the Board funds to pay all current bills, leaving intact the hospital land, buildings and equipment with an indebtedness against it of approximately $20,000 payable to the Fauquier National Bank. The sale will not take place for a period of about six months in order to permit the public or some group of citizens to revive the present association or organize a new one to take over the hospital and pay or assume the indebtedness to the bank.

The new hospital unit at the **District Training School** in Laurel, Md., was dedicated May 7. The dedicatory ceremonies were sponsored by the Monday Evening Club, which has taken an active interest in this institution for the feeble-minded, in coöperation with the Board of Public Welfare. Among the speakers were Mrs. Franklin D. Roosevelt, Dr. James Lewald, Superintendent, and Dr. Winfred Overholser, Superintendent of St. Elizabeths Hospital. The new hospital unit was built at a cost of $250,000.

District health officials inspected the new tuberculosis ward at **Gallinger Hospital** May 22. The new wing, which was built at a cost of $456,000 and has a capacity of 226 beds, will be placed in use sometime in July, according to present plans.

The Social Hygiene Society has elected to its Board of Directors for 1940–43 terms the following members of the Society: Drs. Edith SeVille Coale, Lewis C. Ecker, Robert S. Lamb, William J. Mallory and Daniel Seckinger.

The District of Columbia Pharmaceutical Association held a two-day convention May 23 and 24 at the Wardman Park Hotel, marking the 88th anniversary of its founding. Officers of the Medical Society were guests at the banquet held on May 24. Speakers included Morris G. Goldstein, the incoming president; W. H. Whittlesey, retiring president; Robert L. Swain, editor of *Drug Topics*; and E. F. Kelly, Secretary of the American Pharmaceutical Association.

Irving A. Tennyson, Associate member of the Medical Society, was elected Vice President of the Association. Society members who participated in the meetings were David Maxwell, Dr. George C. Ruhland, Dr. Roy Lyman Sexton and Dr. Herman S. Hoffman.

The United States Pharmacopoeial Convention closed its three-day convention at the Willard Hotel May 15. Dr. C. W. Edmunds of Ann Arbor, Michigan was elected president. Samuel L. Hilton, Associate member of the Medical Society, retired as treasurer after 30 years' service.

Children's Hospital received a check for $975 on May 25 from the Newspaper Women's Club. This completed the Club's $1000 gift to the Hospital.

Dr. William Thornwall Davis and **Dr. Tomas Cajigas** received the decoration of the Order of Carlos J. Finlay on May 15. Presentation was made by Dr. Juan M. Moya, Secretary of Sanitation of Cuba, at a reception given at the Cuban Embassy by the Ambassador, Dr. Pedro Martinez Fraga. Diplomats from 21 American Republics as well as delegates to the Eighth American Scientific Congress were present.

Two members of the Society acted as delegates to the Eighth American Scientific Congress held in Washington May 10–18, 1940. **Dr. William P. Herbst** represented the American Urological Association and **Dr. Wallace M. Yater,** the American Society for Clinical Investigation.

H. Paul Caemmerer, Ph.D., Secretary of the United States Commission of Fine Arts, has presented the library of the Society with a beautifully illustrated volume entitled, "A Manual on the Origin and Development of Washington," for which the Secretary has expressed the Society's appreciation.

Dr. Winfred Overholser and **Dr. Benjamin Karpman** were among the speakers May 20 at the opening session of the 96th Annual Meeting of the American Psychiatric Association in Cincinnati.

Dr. Paul J. Ewerhardt addressed members of the Community Chest Speakers' Bureau at a dinner meeting May 20.

Dr. Thomas E. Mattingly, chairman of the Professional Relations Committee of the Washington Self-Help Exchange, has been elected to the Board of Directors.

Dr. Winfred Overholser has been appointed by the American Unitarian Association to serve on a committee which will aid in the program of refugee work among former residents of Czechoslovakia.

The 1940-41 edition of **Who's Who in America** includes among its new names the following members of the Society: Drs. William DeKleine, Robert Oden, Ivy A. Pelzman, Norman P. Scala and Sara E. Branham.

Dr. Paul F. Dickens and **Dr. George M. Leiby** were included among the speakers at the 21st annual session of the Association of Former Interns of Freedmen's Hospital, which was held June 4–6.

Dr. J. Winthrop Peabody, President of the District of Columbia Tuberculosis Association, made one of the welcoming speeches at the Second Annual Conference of Negro Tuberculosis Workers, May 27.

Oliver Karl Fike of Richmond, Va., has succeeded Charles E. Vadakin as administrator of Doctors' Hospital, assuming his new duties June 2.

Maxwell and Tennyson have announced the opening of their new, modern drug store and pharmacy on the first floor of the Doctors' Hospital and Washington Medical Building.

Tschiffely Brothers announces the removal of their drugstore to 1224 Connecticut Avenue, N.W.

BOOKS RECEIVED FOR REVIEW

Acknowledgment is made of the following books which have recently been received for review:

Hay-fever; What to Do About It. Harry S. Bernton, M.D., F.A.C.P., Clinical Specialist in Allergy, Bureau of Chemistry and Soils, United States Department of Agriculture; Professor of Hygiene, Georgetown University School of Medicine; Allergist to Providence Hospital, Washington, D. C.; formerly, Special Expert (Hay Fever) United States Public Health Service; Past President, The American Society for the Study of Allergy. Pp. 76. Washington, D. C.: Ransdell, 1939.

The Poison Trail. William F. Boos, M.D. Pp. 380. Price, cloth, $3.00. Boston: Hale, Cushman & Flint, 1939.

Ten Years in the Congo. W. E. Davis. Pp. 302. Price, cloth, $2.50. New York: Reynal & Hitchcock, 1940.

Doctors in Shirt Sleeves. Musings on Hobbies, Meals, Patients, Sport and Philosophy. Edited by Sir Henry Bashford. Pp. 294. Price, cloth, $2.50. New York: Veritas Press, 1940.

Medicine and the State. The Relation Between the Private and Official Practice of Medicine with Special Reference to Public Health. Sir Arthur Newsholme, K.C.B., M.D., F.R.C.P. Pp. 300. Baltimore: Williams & Wilkins, 1932.

Experimental Poliomyelitis. Morris Schaeffer, Ph.D., and Ralph S. Muckenfuss, M.D., Department of Health Bureau of Laboratories, New York. Pp. 158. New York: The National Foundation for Infantile Paralysis, 1940.

Health Under the "El." The Story of the Bellevue-Yorkville Health Demonstration in Mid-Town New York. C.-E. A. Winslow, Professor of Public Health, Yale University School of Medicine, and Savel Zimand, formerly Administrative Director, Bellevue-Yorkville Health Demonstration. Pp. 203. New York: Harper, 1937.

Effective Speaking for Every Occasion. Willard Hayes Yeager, M.D. Pp. 444. Price, $2.65. New York: Prentice-Hall, 1940.

A SURGEON'S PRAYER

DEAR GOD!
These strong gloved fingers
Which I flex—
This human hand
Which holds the knife,
Sterile now and steady—
Need Thy guiding skill
To help another life.
Bless now this patient—
Thine and mine—
Who, under Thee, entrusts to me
A precious life!
God of the surgeon's tireless strength,
The surgeon's finite skill,
Grant that I may guided be
To do Thy will.
Amen.

HERBERT PARKER

(*Continued from page 204*)

been on the statute books for a long time and has been vigorously enforced all over the United States. Physicians to obtain these narcotics must do the following: Prescribe on their prescription blank with their name and address printed thereon, their narcotic registration number, the full name of the patient with his address and the date, and directions, all written in ink. It is unwise to have prescriptions printed in full, since all that is necessary to write is the signature, and that can be forged.

Some doctors have telephoned druggists narcotic prescriptions and promised to send the prescription later. It is unlawful for a pharmacist to fill such an order. In two cases recently occurring in this city the physician failed to send the prescriptions in time, and the inspectors discovered these violations. Each druggist was fined one hundred dollars.

This paper is written so that we as physicians will know the law and regulations of the Federal Food, Drug and Cosmetic Act and that the medical profession will not knowingly violate its provision.

This will be a protection for the physician, pharmacist and patient.

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THE VALUE OF SYMPATHETIC INTERRUPTION FOLLOWING THE SURGICAL REPAIR OF PERIPHERAL ANEURYSMS*

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The majority of peripheral aneurysms involves the large arterial trunks of the extremities. The surgical repair by necessity sacrifices the main blood channel. Therefore, the nutrition of the limb distal to the aneurysm depends upon the collateral vessels. If these vessels are adequate in size, number and distribution the function of the extremity will not be imperiled.

The brilliant work of Matas has led to a more or less standardization of the surgery of aneurysms. The preparation of a patient for operation is directed toward the obliteration of the sac and the formation of collateral vessels. Much can be done in the way of development of collaterals in most cases. The best procedure is that of intermittent temporary occlusion of the main trunk above the aneurysm by the use of a Matas band or by digital compression. In cases of ruptured aneurysms the operation may become so urgent because of the spreading hematoma that a sufficient time is not allowed to develop collaterals. Yater,[1, 2] in an excellent study of ruptured popliteal aneurysms, demonstrated by vasographs the development of collaterals before and after repair of these aneurysms. He has also shown how the development of collaterals bridges over the obstructed areas in the large arteries.

The collaterals may seem to be sufficiently developed before operation to insure a viable extremity, but the extent of impairment of the circulation incident to surgical trauma cannot be accurately foretold. Aside from the actual destruction of some of the collateral vessels by surgery, there may be further obstruction by vasospasm. Sudden occlusion of a main arterial trunk by embolism or by ligation is followed by some degree of spasm of the vascular tree distal to the occlusion. Any measure which overcomes spasm and reduces peripheral resistance to blood flow will add to the chances of adequate nutrition of an extremity after the main vessel has been ligated. The surest method of overcoming vasospasm and at the same time reducing the peripheral resistance in the vessels of an extremity is that of interruption of the sympathetic pathways to these vessels. This has been amply proved in animals and in patients with vasospasm.

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* From the Surgical Department of Gallinger Municipal Hospital, Washington, D. C.

Gage[3, 4] has recently applied sympathetic interruption to the treatment of peripheral aneurysms. He has used sympathetic block as a preliminary step before surgical repair of the aneurysm and found that it caused a clotting within the sac. Following repair of the aneurysm the sympathetic interruption prevented vasospasm and caused a rapid development of the collaterals. In fifteen cases so treated, of all types of peripheral aneurysms, he reports excellent results. In none was there ever any question of the adequacy of the collateral circulation.

The most important period, as far as function of collateral vessels is concerned, is immediately following the repair of the aneurysm. It is in the first few postoperative days that gangrene is so likely to develop. It is equally important however that adequate circulation be maintained after this initial period in order to insure a useful limb. The circulation may be adequate during rest and in a warm environment, but wholly incompetent under the stress and strain of normal function. Therefore, it seems that a permanent interruption of the vasoconstrictor fibers is preferred to a temporary block. For this reason I advocate a sympathectomy at the time of the repair of the aneurysm. The value of this combination of aneurysmorrhaphy with sympathectomy can be clearly demonstrated in the following case reports of three types of peripheral aneurysms. Arteriographs made in each before surgery and after healing of the operative wounds clearly demonstrated the rapid development of the collateral circulation.

REPORT OF CASES

Case 1.—K. R., a colored man, aged 43, was admitted to Gallinger Municipal Hospital on September 15, 1939. Five days before the patient had been stabbed in the right arm just above the antecubital space. There was an immediate hemorrhage from the stab wound, but it was successfully controlled by a compression bandage. On the following day he noticed that his right hand and arm were enormously swollen and very painful. This swelling and pain persisted and he finally sought hospital treatment 5 days later. The general physical examination was essentially negative. The right arm was swollen from the tips of the fingers to the axilla. The skin was tense and pitted on pressure. There was a small puncture wound about 4 cm. from the middle of the antecubital space on the anterior and medial aspect of the upper arm. A small amount of dark blood was seen exuding from this wound. The entire right arm was warmer than the left. A thrill could be felt radiating from the punctured wound and extending up the arm and down the forearm. A bruit was heard over this same area. The right radial pulse was not felt. On September 22, 1939 a vasograph (fig. 1) of the right brachial vessels revealed an arteriovenous fistula arising from the brachial artery and vein just above the antecubital fossa. There appeared to be two saccular aneurysms. With bed rest, elevation of the arm, and the application of warm compresses the swelling subsided except in the region of the arteriovenous fistula. The pain persisted and there was a continuous increase in the size of the arm in the region of the fistula. On October 7, 1939 another vasograph was made and this showed a marked enlargement of the false aneurysmal sacs. Because of the severe pain and rapid growth in

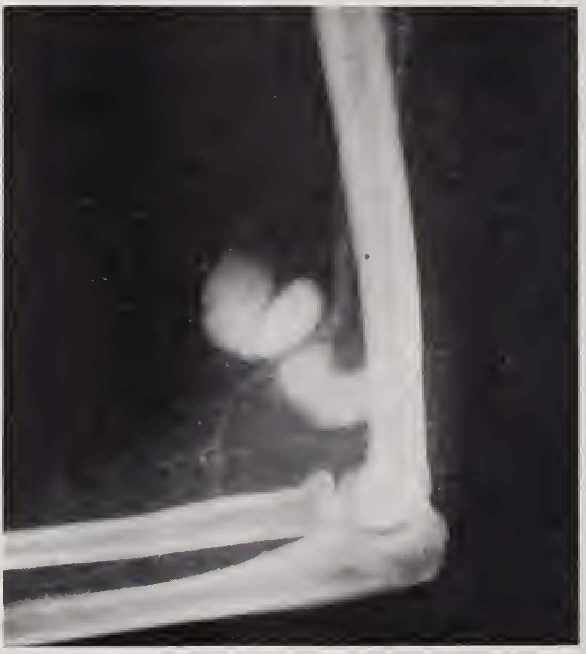

FIG. 1. Vasograph of vessels of arm showing fistula between brachial artery and vein. The two large, opaque masses are false sacs filled with blood and blood clot.

size of the aneurysm surgical treatment was considered necessary to save the extremity. On October 10, 1939 the arm was explored. One large false aneurysmal sac was found lying anterior to the brachial vessels and another posteriorly. Both were partly filled with blood clot. After evacuating these false sacs the arteriovenous fistula was exposed. The brachial artery was found communicating with one of the venae comites. There was also an opening in the posterior wall of the artery which communicated with the false sacs. The fistula was repaired by quadruple ligation (fig. 2). The neck was then prepared and a cervicodorsal sympathectomy was performed by an anterior approach.

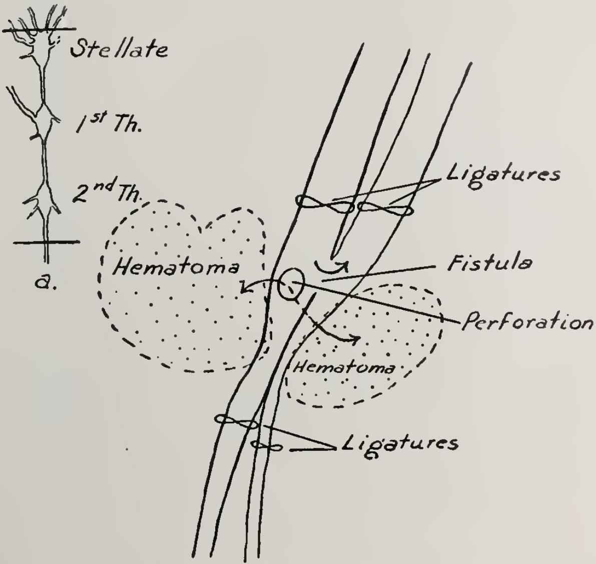

FIG. 2. Schema of fistula and hematomas, showing method of repair. a, Portion of sympathetic chain removed.

The postoperative course was uneventful. The right arm remained about 5°F. warmer than the left arm. The function of the hand and fingers rapidly returned, and the patient was discharged on November 9, 1939.

It is advisable in most cases to allow some three to six months to elapse between the development of a traumatic arteriovenous fistula and the time of surgical repair. Such a period is usually required to insure an adequate collateral circulation. Because of the progressive increase in the hemorrhage from the brachial artery in this case there was little chance for the development of collaterals. The hazard of early surgical repair was completely eliminated by the sympathectomy.

Case 2.—W. G., a colored man, aged 35, entered Gallinger Municipal Hospital on September 11, 1939. In May 1939 he had received a pistol shot wound in the left thigh. This had apparently healed without any evidence of injury to the femoral artery. He was well until in late August 1939, when the lower left thigh suddenly became swollen and extremely painful. The pain and swelling persisted and the patient was forced to seek treatment. On admission the general examination was essentially negative except for the left lower extremity. There was a large ovoid swelling over the inner aspect of the lower half of the left thigh. This tumor was warm to touch but not fluctuant. A continuous bruit could be heard over the entire region. There was no thrill. The knee joint was apparently normal. The leg was moderately swollen with pitting edema. The foot was cooler than its fellow member. There were no dorsalis pedis or posterior tibial pulses. On September 14, 1939 a vasograph was made of the left femoral artery and a large traumatic aneurysm involving the lower third of the artery was revealed. On the following morning the aneurysm was exposed under spinal anesthesia. A small aneurysmal sac was found in the lower femoral artery which had ruptured and formed a large false sac (fig. 3). This sac was filled with clotted blood which was undergoing organization. An endoaneurysmorrhaphy was performed and the incision closed. The patient was then turned on the right side and a left lumbar sympathectomy was done through an oblique lumbar incision. The second, third and fourth left

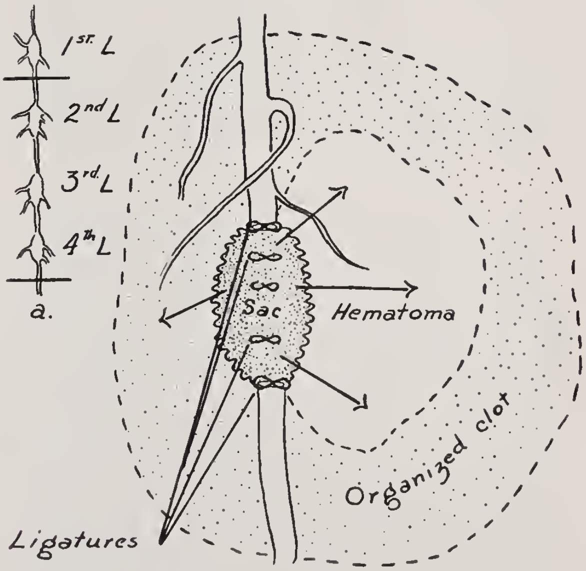

FIG. 3. Schema of ruptured femoral aneurysm and false aneurysmal sac, showing the method used to repair the defect in the artery. a, Portion of lumbar sympathetic chair removed.

lumbar ganglia were removed. Convalescence was uneventful. There was never any evidence of nutritional changes in the limb. The patient was discharged one month later. Follow-up examinations have shown a return to normal function of the involved limb.

Case 3.—H. B., a colored man, aged 37, was admitted to the Gallinger Municipal Hospital on May 3, 1940. About 3 weeks before admission he had noticed a small painful lump in back of the left knee which had developed spontaneously. The pain was dull and continuous but was aggravated by jarring and strenuous exercise of the limb. On walking or running the mass seemed to increase in size. There were no other symptoms of impaired circulation. The pain persisted, and the mass gradually increased in size. The general examination was essentially negative except for the left lower extremity. In the region of the left popliteal space there was a large ovoid pulsating tumor. There was no thrill present, but a continuous bruit could be heard over the tumor. The left dorsalis pedis and posterior tibial pulses were present and of good volume. There was slight pitting edema of the left leg and it was obviously warmer than its fellow member. An arteriogram showed a small ruptured aneurysm of the popliteal artery with a large false sac. The patient was placed on a régime to develop collateral vessels in the left leg. The pain persisted, and on May 14, 1940 the popliteal mass suddenly increased in size and began to extend down the posterior aspect of the leg. The dorsalis pedis and posterior pulses disappeared. The pain which originally was localized now extended the length of the leg and into the foot and toes. Because of this obvious hemorrhage surgical treatment seemed urgent.

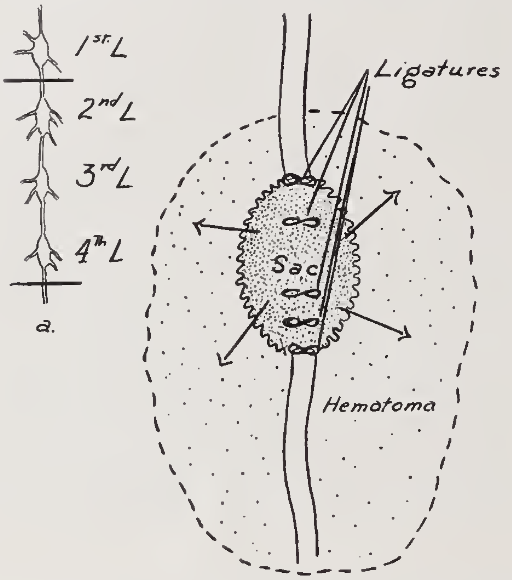

Fig. 4. Schema of ruptured popliteal aneurysm and surrounding hematoma, showing the method used to repair the defect in the popliteal artery. a, Portion of lumbar sympathetic chain removed.

On May 15, 1940 a vertical incision was made over the left popliteal space and a large blood clot was exposed. This clot was evacuated and a small ruptured sac was found in the middle third of the popliteal artery (fig. 4). An endoaneurysmorrhaphy was done and the wound closed. The patient was turned on the right side and left lumbar sympathectomy was done through a left lumbar incision. Although he developed an infection of the operative wound of the leg there was never any nutritional disturbance of the leg and foot. He is now up and about the ward.

Conclusion

By adding sympathectomy or sympathetic block to the armamentarium of the surgery of peripheral aneurysms, as originally advocated by Gage, one more milestone has been passed in the successful management of these cases. Many limbs will be saved by overcoming the vasospasm incident to ligation of the main arterial trunks. A more prompt development of adequate collateral circulation will be insured by lowering the peripheral resistance to the arterial blood flow.

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PROLONGED RELIEF OF PERINEAL PAIN FOLLOWING EPISIOTOMY

PRELIMINARY REPORT

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On most obstetrical services where routine episiotomies are performed on primiparae and occasionally on multiparae, one is struck by the common complaint of perineal distress, discomfort and even severe pain, which reaches its peak on the second and third days post partum. The high percentage of patients in the Columbia Hospital for Women who complained of discomfort and soreness, and who objected to the carrying out of routine postpartum perineal care, presented an immediate problem.

An attempt was made to find a local anesthetic which in addition to providing complete anesthesia of the nerve endings in the operative area would exert an analgesic effect sufficiently long to relieve the patient of her distressing pain over the peak period. It would be ideal if an agent could be found which combined these two properties with antisepsis since one is working in a field subject to secondary infection. Another factor to be considered was toxicity, since the tissues surrounding the operative field had been subjected to trauma with consequent reduction in tissue resistance. Therefore, any local irritative phenomenon in this area would be contraindicated. The increased vascularity of the parts during parturition renders a rapidly absorbed anesthetic agent dangerous. Considering these desired characteristics it was difficult to discover an agent which would combine them all.

After examining several local anesthetics a colleague in New York City suggested Eucupin-Procaine Solution,* with which he had had some experience. Eucupin was first used as an antiseptic; later its anesthetic properties were discovered and described by Morgenroth.[1] Its prolonged action is explained by the fact that it remains in the tissues locally and may be recovered for analysis 4 days after it is injected. Henius[3] in Germany has applied it in $\frac{1}{3}$ to 2 per cent aqueous solution to ulcerating carcinoma both for its anesthetic action and to clean up secondary infection. Kilbourne[4] injected 0.17 Gm. per kilogram of body weight of eucupin dihydrochloride subcutaneously into rabbits which were kept alive 14 days. None of these showed the slightest toxic symptom. Kilbourne also made the statement that if man were equally as susceptible to eucupin as the rabbit, and if water intoxication were disregarded, the amount of clinically effective anesthetic solution required to be lethal by subcutaneous infiltration would be about 3 gallons. The possibility of peculiar individual susceptibility to eucupin has been investigated by Dawson and Garbade,[5] who found that because of the long and branched side chain in its molecule, natural idiosyncrasy to eucupin is unlikely,[6] although idiosyncrasy may be acquired.[5] De Takats[7, 8] of Northwestern University performed more than a hundred operations with eucupin in saline solution without a single reaction. In a series of 100 intradermal wheals which he made there was no evidence of sloughing.

Eucupin must be kept on the acid side, and its contact with alkalies causes precipitation. It had been reported that a solution of eucupin dihydrochloride in saline was slightly irritating on injection and occasionally gave rise to an unpleasant burning sensation before the anesthetic effect took place. To overcome this disadvantage 1 per cent procaine hydrochloride was added. This addition caused Eucupin-Procaine Solution to have an immediate as well as a prolonged effect, since the procaine content produces an immediate but transient anesthesia, while the eucupin dihydrochloride in the solution produces a delayed but prolonged analgesic effect. The anesthesia merges imperceptibly into analgesia of sufficient depth to carry the patient over the peak pain period, but does not interfere with tissue function or healing. This is accounted for in part, as stated by Bruhn,[9] by the high bactericidal power of eucupin which is 40 times more effective than phenol against staphylococci and streptococci, the most frequent causes of wound infection.

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* Supplied through the courtesy of Rare Chemicals, Inc., Nepera Park, N. Y.[2]

Our series was divided into 2 groups, the first comprising 32 cases, 16 controls and 16 with drop ether and local injections of Eucupin-Procaine Solution.

TECHNIC

The patients in this series received either paraldehyde or McCormick's solution during the first stage and second stage of labor, and drop ether at the time of delivery. Just before the passage of the head over the perineum a median or mediolateral episiotomy was done. After the delivery of the baby and the placenta, drop ether was discontinued. For the repair of the episiotomy Eucupin-Procaine Solution was injected in the following manner. A 20 c.c. syringe with an attached 18-gauge needle was filled with the solution. The needle was inserted at the mucocutaneous junction and 5 to 6 c.c. of solution was injected under the cutaneous edge toward the lower angle of the episiotomy wound. The needle was brought out until the needle's point was just below the skin's surface, the direction reversed upward, and 5 to 6 c.c. injected under the edge of the mucous membrane to the upper angle of the episiotomy wound. The needle was then inserted into the deeper tissues and 8 to 10 c.c. of solution injected in a fanwise manner. This was repeated on the opposite side of the incision. The episiotomy was then repaired in two layers in the routine manner. The patient usually reacted from the drop ether before the completion of the repair, but in every case the local anesthetic action of Eucupin-Procaine Solution was sufficient to provide freedom from pain.

All of these patients were questioned on each succeeding day, and in no case was there perineal pain on the second and third day post partum. A gradual return of sensation in the perineum was noted on the fourth day with definite hypoesthesia which continued to the fifth day. By the sixth day the effect of the anesthetic-analgesic solution was gone.

In this first group of 32 cases the incisions were repaired with plain catgut in both control and injected patients. Two of the Eucupin-Procaine cases suffered separation of the skin edges and 3 of the controls suffered a similar fate. This moderate percentage of cases which were not healing as well as it appeared they should, temporarily discouraged the further study of this new anesthetic solution. Several weeks later chromic catgut was used for repair of the episiotomy wound and better results obtained. It was then decided to collect a further series of cases. Fifteen cases of episiotomy were repaired following Eucupin-Procaine local injection, and 15 cases of episiotomy were repaired without these injections. The same favorable results regarding relief of pain were obtained in this second group of patients with Eucupin-Procaine Solution as had been obtained in the first group, with the added advantage of no separation of wound edges.

It may be concluded from a comparison of these two series of cases that the intense activity of the white blood cells in the operative area following delivery accounts for the more rapid absorption of the plain catgut than one would anticipate. The use of chromic catgut obviated the instances of wound separation, and the comparison can be fairly drawn since no other alteration in technic occurred between the two groups. A further impression was that by the use of a local anesthetic agent the natural distortion of the tissues caused by the injection of the solution gave to the parts the appearance of the normal edema which follows trauma and obviated the necessity of tying the repair sutures too tightly. Very often in the past episiotomy wounds have been repaired too snugly, and the resultant edema which follows such a procedure has torn out the sutures.

In this short series, which was inadvertently divided into two groups, the patients have been brought a definite measure of comfort on the second and third day post partum by means of a repair of the episiotomy wound with local injection of the anesthetic-analgesic Eucupin-Procaine Solution. In addition to this definite relief of postpartum pain there is less postpartum hemorrhage because of the elimination of postpartum general anesthesia, and more meticulous perineal care post partum is possible because of the absence of distressing soreness; furthermore, the artificial edema of the tissues caused by the injection of the solution counteracts the general tendency to draw the sutures too tightly.

These two series of cases have demonstrated the value of the use of a local anesthetic-analgesic solution for relief of perineal pain after deliveries in which episiotomies have been performed. Chromic catgut (no. 1) is definitely indicated in the repair of episiotomy with this technic.

N. B. I should like to take this opportunity of expressing my deep appreciation for the encouragement given to me by my former chief, Dr. Prentiss Willson, and for his suggestions and guidance during this study. Dr. John Dominick and Dr. Pembroke Grove, my colleagues in the hospital, rendered valuable assistance. I should like to thank Miss Jenson and Miss Hoffman for their splendid coöperation, without whose generous help this contribution to the comfort of our patients could not have been made.

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Case of muscular weakness relieved by desoxycorticosterone acetate. Striking and dramatic relief in a case of myasthenia gravis, a chronic progressive muscular weakness, by means of treatment with desoxycorticosterone acetate is reported by Robert C. Moehlig, M.D., Detroit, in *The Journal of the American Medical Association* for July 13, 1940. The product, a synthetic preparation of the cortex hormone of the adrenal gland, was implanted in pellets under the skin.

The disease, which was sudden in onset, produced muscular fatigue, suffocation, loss of appetite and utter exhaustion. The patient lost weight rapidly owing to his inability to eat properly, since solid foods would produce choking. His condition was precarious and the disease was rapidly progressive, so that death from paralysis of the breathing muscles seemed imminent.

"The relief obtained with desoxycorticosterone acetate was definite," the author says. "His improvement has continued for 115 days after implantation, without a sign of recurrence. He carries on his routine duties as a physician and is also able to carry on other activities, such as dancing. He has regained the lost weight. Dryness of the skin has also disappeared."

Pointing out that remissions may and do occur in this disease, Dr. Moehlig declares: "Naturally, further experiences with other patients as well as the continued progress of this patient are desirable before final conclusions concerning the lasting benefits are made."

While the cause of myasthenia gravis is unknown, Dr. Moehlig suggests that it may be due to a pituitary disturbance with an inherited defect of the muscular system. Many drugs have been tried for the disease, ephedrine sulfate and glycine being among the most effective.

THE EVALUATION OF PRIVATE SEROLOGIC LABORATORIES BY MUNICIPAL OR STATE AGENCIES*

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Some years ago it became apparent that the ultimate success of any effort to control syphilis would depend, in a large measure, upon the thoroughness with which serodiagnostic work was carried out in the laboratories of the country; this from the viewpoint of mass diagnosis. It was apparent too that there existed a wide variation in the standard of service given by laboratories serving both a large and small population group. The mere fact that a laboratory had an excellent reputation was no proof that its serologic work was beyond criticism.

It is to the credit of the American Society of Clinical Pathologists that it recognized these facts and requested the Surgeon General of the United States Public Health Service to appoint a committee to evaluate the serologic tests done in the United States. The Committee consisted of Doctors H. H. Hazen, A. H. Sanford, F. E. Senear, W. M. Simpson and R. A. Vonderlehr of the United States Public Health Service; later Doctor J. F. Mahoney, Director of the Venereal Disease Research Laboratory of the Public Health Service, was added.

The initial study of the Committee, the report of which was read in 1935, was undertaken to evaluate the several distinctive technical methods developed by American serologists both upon the blood and spinal fluid. Thirteen serologists participated in this study. As a result four of the methods were selected to serve as controls in future studies because of their relatively high ratings, their practical adaptability, the availability of complete descriptive literature, and their widespread use. These were the methods of Kahn, Kline, Kolmer and Hinton, to which were later added the Eagle tests.

With this foundation the subsequent work of the Committee was designed to survey the standards of efficiency maintained in laboratories doing a large volume of serologic work. Participation in the surveys was limited to organizations serving the profession in large population groups. An important objective was obtained by extending an opportunity to participate in serodiagnostic evaluation studies which afforded the laboratories a basis for comparing their results with those produced by the originators of the respective control technics. The basic intent of the work was to make it informative rather than critical.

In the early work of the Committee index figures based upon percentage calculations of positive findings in known syphilis and negative findings in presumably normal donors were utilized as a means of expressing sensitivity and specificity. Subsequently a second type of analysis was added. This consisted of a determination of complete agreement, partial agreement and complete disagreement between the results of the participating laboratory and the suitable control. In this analysis only the specimens that were tested in both laboratories were considered. This is known as the horizontal chart method.

As the work of the Committee progressed it became necessary to limit the evaluation studies to the state laboratories exclusively. It is quite obvious that comparable specimens of blood cannot be sent to more than fifty institutions.

The feeling of the Committee has always been that as the state laboratories were placed upon a satisfactory basis they should offer their services in evaluating the laboratories within their own domains, offering opportunities at first to those institutions doing a large volume of work, namely, the more important municipal and county laboratories, if such existed. The city laboratories should, when they obtained a satisfactory rating, offer evaluation opportunities to the private laboratories in the cities.

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* Read before the Society, February 28, 1940.

It is entirely obvious that it is to the interest of both the profession and the populace that the reliability of all serologic laboratory work be beyond criticism. At times it may be feasible to recognize a laboratory as satisfactory because of the high character and interest which the director shows in serology, and because the laboratory has the necessary physical equipment. But it should again be emphasized that the mere fact that an institution which does satisfactory blood chemistry or beautiful bacteriologic work may not do equally good serologic work.

The Committee has also felt that opportunities should be developed by which technicians could be trained and experienced serologists sent directly to laboratories which were having difficulties in the performance of their work. To a large extent this has been done. The large number of requests that have come in for aid of this type shows that it is both needed and appreciated.

Up to the time of the Conference of Laboratory Directors and Serologists in October 1938 at Hot Springs, Arkansas, the work in the evaluation of serologic tests was quasi-official. However, at this conference a recommendation was favorably acted upon which requested that the Surgeon General assume this activity as a function of the United States Public Health Service. The plan as outlined would go far toward placing a needed and helpful facility upon a more reliable basis than can be attained through a voluntary arrangement.

In addition to continuing the evaluation studies the new facility would conduct a broad program of research upon many of the problems involved in the serodiagnosis of syphilis. The organization could also serve to closely scrutinize the new test procedures which are being proposed yearly. It could direct the matter of standardization of test material, the dissemination of pertinent literature, and the promotion of a more widespread use of serology in uncovering cases of syphilis.

It should be borne in mind that the object of the Evaluation Committee is to aid and not to hinder or to dictate in the practice of serology. All evaluation tests should be done upon a strictly voluntary basis, upon a basis whose fundamental principle is self-help. However, it should be borne in mind that a laboratory which has been evaluated and approved will be in a much stronger position than one which has not been approved. It will be recalled that many states are passing laws requiring that premarital or prenatal tests for syphilis be routinely done, and that the vast majority of these states require that the necessary serologic work shall be done in approved laboratories only. It is quite obvious that unapproved laboratories will lose a large part of this business which is destined to increase greatly in the coming years. When the profession finds that some laboratories are approved and some are not it is much more apt to send its work to those bearing the seal of approval. It should be a great satisfaction to a private laboratory director to know that his test ranks with those performed by the masters of serology.

So much for the national problem. Now let us mention specifically the possibilities of the evaluation of tests for the serologic laboratories within the District of Columbia, of which there are nearly twenty. After all, Washington is the Capital of the Nation, and three medical schools, exclusive of the Army and Navy medical schools, are within its boundaries. The Army Medical Museum and the National Institute of Health are nationally recognized medical institutions, and the profession of Washington ranks second to none in the country. It is not asking too much to suggest that the members of the profession scrutinize their laboratories with utmost care.

The laboratory of the Health Department of the District of Columbia was evaluated in 1939, and its performance of both the complement fixation and the Eagle-macro flocculation tests was satisfactory. The Health Department does not perform the Hinton, Kahn, Kline or Kolmer tests. It is the feeling of the Evaluation Committee that the author serologists of these tests are entirely too busy to be asked to participate in local problems unless they are paid for so doing. However, inasmuch as all of the author serologists have agreed to aid in evaluating the tests as performed in the laboratories of the District of Columbia without compensation the Health Department of the District of Columbia should certainly make full use of their services.

At this point it might be wise to mention certain important details concerning the evaluation procedures that the Evaluation Committee has found to be efficacious:

1. An entirely unprejudiced Committee was appointed to study the question and to evaluate the reports.

2. An important point in the evaluation plan was the assignment of a code letter as a substitute for the name of each participating serologist. Thus the identity of the serologist performing the test was unknown to the members of the Committee until the completion of the study.

3. Two hundred syphilitic patients and 100 presumably nonsyphilitic patients were donors. This large number was selected since it was obvious that the more specimens of blood taken the less the chance of random variations being too important.

4. The selection of patients was made with an eye to possible reëxamination should there be conflicting reports. The control donors were selected from the faculty and medical students of a university.

5. Whole blood, not pooled, was sent to each serologist, in the same way as it is delivered in private practice.

6. The amount of blood furnished each laboratory depends upon the number of tests that the laboratory runs; more than 4 c.c. was not furnished.

7. The number of laboratories to be evaluated was determined by their acceptance.

8. The amount of blood from each donor was estimated at 4 c.c. to each laboratory.

9. It was found necessary to deliver from one central place on the same day samples of syphilitic blood and of presumably nonsyphilitic blood.

10. Satisfactory standards for sensitivity and specificity have been published in the Proceedings of the Hot Springs Conference, which is Supplement No. 9 to Venereal Disease Information. This provides that the specificity rates of the participating laboratories shall not be more than 1 per cent below the specificity rates of the control laboratory, and that the sensitivity rates must be not more than 10 per cent below those of the control laboratory.

11. In its early studies the Serologic Committee rated all doubtful tests as negative. Recently it has been found advisable to penalize participating laboratories one-half point for each false doubtful submitted, and to reward it one-half point for each doubtful result obtained from the serum of a known syphilitic patient.

12. All donors, whether syphilitic or presumably nonsyphilitic, were given a thorough physical examination, the results of which were recorded on a special history sheet.

It should be specially noted that the Committee for the Evaluation of Serodiagnostic Tests for Syphilis is not desirous of dictating how local evaluation studies are to be made, but is simply giving the results of its own experiences.

It is worthy of note that in many states private laboratories are seeking to be evaluated. In the state of Georgia 92 per cent have applied entirely voluntarily.

It is gratifying to learn that both the local health department and the local serologists are considering an evaluation performance along the above lines.

CLINICO-PATHOLOGIC CONFERENCE*

THE DEPARTMENT OF MEDICINE, GALLINGER MUNICIPAL HOSPITAL

SPONTANEOUS RUPTURE OF AN ANEURYSM OF THE ILIAC ARTERY SUCCESSFULLY TREATED SURGICALLY

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AND

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May 9, 1940.

Dr. Yater: Dr. Klepser, the Intern on Ward B, will present the next case.

Dr. Roy Klepser: This patient, J. F., case no. B 13325, is a colored man, aged 51, whose occupation is that of a laborer. He was admitted on May 4, 1940 complaining of pain in the left leg and a burn of the left thigh. His illness dated back to April 6, 1940, when he noticed a dull aching pain in the left leg, so persistent he had to stop work. He consulted a physician, and local therapy in the form of alcohol rubs, ice packs and liniment was tried without relief.

About 24 hours after the onset of pain the skin over the left leg became dry, shiny, and scaly without swelling. On April 10 pain developed in the left inguinal area and at the same time the medial aspect of the left thigh from femoral triangle to knee was observed to be swollen. While lying in bed, the left knee became flexed requiring manual assistance for extension.

The patient applied hot water bottles to the left thigh for relief of pain. On April 27 he sustained a severe burn of the lateral aspect of the left thigh. There was no associated pain, and because it failed to heal the patient sought hospitalization.

His history reveals the fact that the left lower extremity was painfully bruised in an auto accident in August 1936. There was no fracture. No acute trauma preceded the present illness. The remainder of the past history and system review are essentially negative.

Physical examination on admission showed a fairly well developed and well nourished, middle-aged, colored male lying comfortably in dorsal decubitus. His temperature was 100°F., the pulse rate 120, the respiratory rate 26, and the blood pressure 160/100 in the left arm and 170/100 in the right arm. He appeared mentally alert, coöperative, and in no acute distress. The heart was moderately enlarged to the left, M.L. measuring 10.5 cm., and M.R. 5 cm. The diameter of the chest was 29 cm. The heart rate was 120, the sounds were of good quality, regular, rhythmic and forceful. No murmurs were heard. A_2 was greater than P_2.

Inspection of the abdomen revealed an asymmetry, mainly of the lower quadrants, the left side being larger than the right. Further examination revealed a large elongated, rounded, fixed tumor mass extending from the left hypochondrium to the left inguinal area and as far over as the midline. The mass measured approximately 20 by 10 cm. It was very firm and pulsated somewhat with each heart beat. A systolic thrill could be felt over the entire left lower quadrant and auscultation revealed a systolic bruit. A swelling was also present in the left femoral triangle and appeared to be a continuation of the abdominal tumor (fig. 1).

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* These conferences are held under the chairmanship of the Head of the Department of Medicine, Dr. Wallace M. Yater, every Thursday from 2 to 4 p.m. Cases of particular interest, or those presenting diagnostic problems, are presented and discussed. This is a resumé of the discussion of such a case.

On the lateral aspect of the left thigh there was a large denuded area measuring about 15 by 10 cm. This area was the seat of a low-grade infection evidently following the burn with the hot water bottle. The whole left lower extremity was somewhat enlarged, but there was no pitting edema.

The patient was unable to extend the flexed knee. The cremasteric and patellar reflexes were absent on the left; all other reflexes were essentially normal. The left dorsalis pedis and posterior tibial arteries were not palpable, but a slight popliteal pulsation was present.

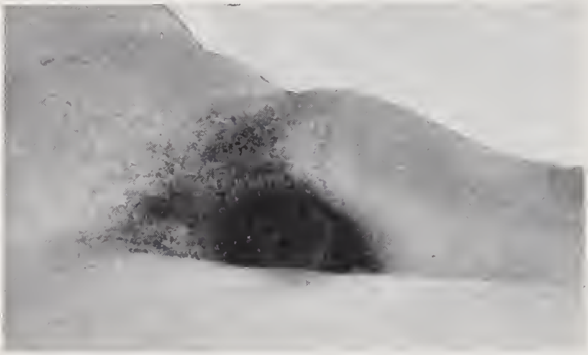

FIG. 1. Swelling in the region of Scarpa's triangle continuous with that in the left side of the abdomen.

A large area of anesthesia to painful stimuli was mapped out extending from the left femoral triangle down over the anterior surface of the entire left lower extremity to the dorsum of the foot. The blood pressure taken over the right thigh was 160/100. No blood pressure readings were obtainable in the left thigh.

A urinalysis showed acid reaction, specific gravity 1.022, 2 plus albumen, no sugar. Microscopically there were occasional clumps of white blood cells. The red blood cell count was 2,550,000; there were 10,350 white blood cells, with 80 per cent polymorphonuclears, 4 per cent bands, 13 per cent lymphocytes, and 4 per cent mononuclears. The Kahn test of the blood was 4 plus. A roentgenogram of the left hip and thigh revealed no bony abnormalities, and no tumor mass could be visualized.

DR. YATER: Dr. Klepser, what is your opinion about the diagnosis in this case?

DR. KLEPSER: The mass in the left side of the abdomen and the inguinal area is probably an aneurysm of the left iliac or femoral artery, either traumatic or syphilitic in origin. The mechanical pressure of the aneurysm on the femoral nerve has produced the paralysis and anesthesia noted. The denuded and infected area on the lateral surface of the left thigh resulted from a burn by a hot water bottle.

DR. YATER: Dr. Sugar is the Junior Medical Resident in this case and I should like to have him give his opinion.

DR. SUGAR: I agree with Dr. Klepser that this patient has an aneurysm of the left external iliac or left femoral artery, probably syphilitic. Since admission he has maintained a daily elevation of temperature of 99° to 101°F., and the pulse rate has varied from 90 to 120. This may be due to the infected burn of the thigh. The lack of dilated and tortuous veins and the absence of trophic changes in the foot help to rule out arteriovenous fistula.

DR. YATER: The presence of a thrill palpable over the mass and extending some distance therefrom, along with a systolic bruit, suggests consideration of the diagnosis of arteriovenous fistula, although the thrill and bruit of a fistula are much more extensive. However, rupture of an aneurysm with pressure of the resultant blood clot on the vessel would also produce a localized bruit and a thrill. There is no distension of superficial veins, and the mass is too large for an arteriovenous fistula. Only if blood withdrawn from a vein below the tumor were found to be arterial in nature could a diagnosis of arteriovenous fistula be made.

We must also consider the possibility of dissecting aneurysm of the abdominal aorta, although this is not probable, since there was no severe pain in the beginning and the mass is too unilateral and too large. Furthermore, there is no blood in the urine and not enough neurologic disturbance of the left leg.

The most likely diagnosis is spontaneous rupture of a relatively small aneurysm of the left iliac artery. This would explain the rapid development of such a large mass as being due to the escape retroperitoneally of a large amount of blood which has clotted and compressed both the artery and the vein. The severe anemia could well be due to such an internal hemorrhage, and the fever to absorption processes. Leukocytosis is present in such circumstances.

As far as therapy is concerned, operation would be difficult but necessary for recovery. In the case of rupture of the more common aneurysm of the popliteal artery, one can improve the collateral circulation by bouts of compression of the femoral artery against the pubis, and the vessel can easily be ligated.[1] In the present case one would have to control hemorrhage by compression of the aorta during the operation. An adequate collateral circulation has probably already been established, because the extremity is warm even though there is no popliteal blood pressure. An operation with ligation of the iliac artery may prove successful and I recommend this procedure.

May 16, 1940.

Dr. Yater: I shall ask Dr. Sugar to report on the progress of J. F., whose case was discussed on May 9.

Dr. Sugar: The patient has been seen by Dr. J. Ross Veal, our Chief Resident Surgeon, who believes the patient has an aneurysm of either the iliac or femoral artery. He is of the opinion that this can be isolated retroperitoneally and successfully ligated. He recommends surgery as soon as the burn of the left thigh has healed. On May 13 the blood count showed 3,430,000 red blood cells. The patient consents to operation.

June 13, 1940.

Dr. Yater: Will Dr. Sugar report on the further progress of J. F.

Dr. Sugar: On May 26, 1940, the patient was transferred to surgery. The following day, after suitable preparation with a blood transfusion, the operation was performed. Through a left lumbar incision extending from the twelfth rib to the symphysis pubis the aneurysm was exposed extraperitoneally. There was a large hematoma surrounded by a false sac filling the left side of the abdomen. The abdominal aorta was exposed just above its bifurcation, the exposure being made possible by approaching it from behind the hematoma. The false sac was then opened and about 2 liters of dark clotted blood was evacuated. Immediately on removal of the clot there was a gush of bright red blood from the bed of the sac. This was easily controlled by digital compression of the abdominal aorta. The external iliac artery was then exposed and a small ruptured aneurysmal sac was revealed (fig. 2). The proximal and distal openings of the artery in this ruptured sac were about 3.5 cm. apart. The external iliac was markedly dilated up to its origin from the common iliac. An endoaneurysmorrhaphy was

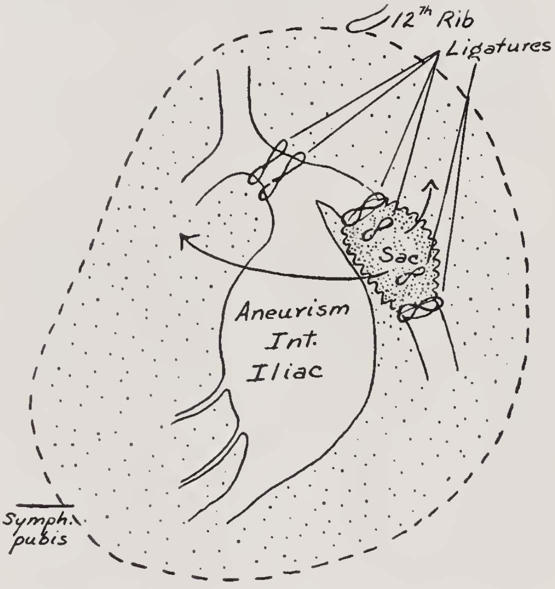

Fig. 2. Schema showing method of repair of the ruptured aneurysm of the external iliac artery, ligation of the common iliac artery, and aneurysm of the internal iliac artery. Broken line indicates size of hematoma. (Drawing made under direction of Dr. J. Ross Veal, who performed the operation.)

done. On further exploration it was found that the internal iliac artery also presented a fusiform dilatation extending proximally to its origin from the common iliac. Distally this aneurysm involved the large branches as well as the parent stem. The common iliac was exposed, and by compressing it all pulsation in the aneurysm ceased. It was then doubly ligated. Two rubber drains were placed in the cavity left after evacuating the hematoma and the incision was closed in layers. At the close of the operation the left leg was wrapped with sheet wadding and placed under a thermostatically controlled heat cradle at 94°F.

The patient returned to the ward in shock, which was quickly relieved by transfusions and fluids given parenterally. He is now convalescing fairly well. He maintains a low-grade temperature elevation of 100° to 101°F., which may be due to absorption of fibrin in the aneurysmal fossa. He is sensible of pressure over the left foot and can move the toes and left leg slightly. He offers no subjective complaints. There are no trophic disturbances. The extremity is kept under a heat cradle at all times. It appears that the operation will have been a success.

Dr. Yater: I was present at the operation and consider it a very masterful piece of work.

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Human globulin is of great benefit in a measles prevention program. Human globulin, a preparation which contains an immune factor or factors against measles and which is made from placental extract, can be used with great benefit in the prophylaxis of measles on a city-wide basis, Herman Bundesen, M.D., William I. Fishbein, M.D., Irving R. Abrams, M.D., and Richard Miller, B.M., Chicago, declare in *The Journal of the American Medical Association* for July 13, 1940, on the basis of the results of their extensive use of this preventive for Chicago children. The placenta is the organ which surrounds the baby in the womb and is expelled at birth. It connects the mother and child by means of the umbilical cord.

Although the use of serum from convalescent measles patients is more potent in preventing measles and produces fewer unfavorable reactions, globulin is more readily available and would have to be used in a large outbreak if the serum could not be procured, the authors point out.

In the authors' study, 678 susceptible children exposed to measles were inoculated with globulin. Three hundred fifty-three, or 52.1 per cent, failed to contract measles. Of the 325 children who had measles, 293, or 90.1 per cent, contracted a mild form of the disease. Thus 95.2 per cent either failed to have measles or had it in a modified form.

Convalescent measles serum was given to 299 other children exposed to the disease. Of these 219, or 73.24 per cent, failed to contract the disease. Of the eighty children who had measles, seventy-four, or 92.4 per cent, contracted a modified type. Serum, therefore, offered some degree of protection to 293 of the 299 children, or 97.9 per cent.

Of a control group of 328 susceptible children who did not receive any injection, eighty-seven, or 26.6 per cent, failed to contract the disease; 241, or 73.4 per cent, had measles. Of the 241 who contracted measles, 185, or 76.6 per cent, had a mild form.

"Serum offered 21.14 per cent greater protection than globulin, and globulin offered 25.5 per cent greater protection than no injection," the authors state. "Also, it is interesting to note that 26.6 per cent of the susceptible children in the 'no injection' group escaped the disease even with measles in their own home, indicating that immunity to measles may be present without the use of any preventive substance.

"Of the group given globulin and later contracting measles, 21.1 per cent were free from prostration; of the group given serum 26.3 per cent were free from prostration, and of children not receiving any injection only 2.6 per cent remained free from prostration.

"The dose of globulin used in this study was smaller than that usually recommended. No doubt if larger amounts had been used soon after the exposure, more instances of complete protection would have resulted. The purpose of this study, however, was to evaluate globulin on a large scale basis, and not necessarily to determine the optimum dosage.

"The dose of measles-preventive and modifying substances, such as immune globulin or convalescent serum, should be gaged by the following factors: (1) whether the susceptible child is in a hospital or at home, (2) the length of time following exposure, (3) intimacy of exposure, (4) the health status of the susceptible individual and (5) the type of measles prevalent (mild or severe)."

MÉNIÈRE'S SYNDROME

REPORT OF TWO CASES TREATED WITH HISTAMINE ADMINISTERED INTRAVENOUSLY

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There have been many methods of treatment devised to attack Ménière's syndrome, some from the medical viewpoint and some from the surgical viewpoint. Neither of the two types, nor both of them combined, has produced any satisfactory system of therapy. Shelden and Horton[1] have recently reported a method of treatment which seems to be very effective so far as controlling the immediate paroxysm and which also seems to have an ameliorating effect on the course of the syndrome.

It is not the purpose of this communication to add any confusion to the issue by propounding a new theory or devising a new method of therapy; rather, it is the idea of reporting two cases treated successfully by the method described by the above-named authors.

Ménière's syndrome is characterized by recurrent severe attacks of sudden severe vertigo, objective or subjective, tinnitus, with increasing deafness and nausea and vomiting. Differential diagnosis is not difficult in the typical case, but it should be remembered that tumors along the course of the eighth nerve or tumors of the cerebellopontine angle manifest themselves by practically the same symptoms. Careful examination, however, eliminates these.

Report of Cases

Case 1.—The patient, a 53-year-old white female, married, presented herself, complaining of dizziness, nausea and vomiting and ringing in the right ear. These symptoms began suddenly about 3 years ago, and while the severity had not increased, the most distressing feature was the increasing frequency with which the attacks were appearing. The patient, a government worker, was compelled to lose as much as 3 days' work a week by nature of these attacks. The typical attacks were heralded in by the intense ringing noise, then the intense objective vertigo, and lastly the nausea and vomiting. In eliciting the above facts, it was learned that the patient had been using large amounts of baking soda for the relief of epigastric discomfort.

There had been increasing deafness in the right ear since the onset of the disease. There was no change in visual acuity and no ataxia between attacks, but during the acute attack walking was almost impossible because of dizziness, which, in turn, caused staggering. There was an occasional headache, which seems to have no connection with the onset or disappearance of the acute attack. With the paroxysm the patient was completely incapacitated, being obliged to stay in bed. The length of the attacks had increased from 1 hour to 24 and sometimes longer. There was no history of paresthesia or dysesthesia of the face.

The past medical and surgical histories were irrelevant, with the exception of a complete hysterectomy done 9 years before.

The patient was obese, weighing 175 pounds (79.5 Kilo.). The blood pressure was 110/65. The general physical examination was essentially negative. Examination of the ocular fundi showed a minimal retinal arteriosclerosis and no papilledema. Examination of perimetric fields revealed no contraction. The right membrani tympani showed retraction with a pearly white color. The hearing in this ear was diminished, grade 2 on a basis of 4.

A roentgenogram of the skull showed no evidence of increased intracranial pressure. Urinalysis and blood studies, including a blood Wassermann reaction, were negative. Neurologic examination revealed no pathologic reflexes. There was no corneal anesthesia, and the patient easily recognized trace figures on the right side of the face.

A diagnosis of Ménière's syndrome was made, and treatment was given by methods already established. She was placed on the Furstenberg diet[2] and given a 25 per cent solution of potassium chloride which she used 4 times daily. At the end of the first week there was no improvement. The paroxysms continued with the same frequency.

She was then given 2 milligrams of histamine acid phosphate in 250 c.c. of normal saline solution intravenously. Following the intravenous infusion, she exclaimed that her ear had not felt as well in years. She returned a week later to report that she had had 1 severe attack during the week. This, however, was less than she had experienced in the year previous. She was given a total of 8 intravenous injections over a period of 3 months and at present is completely symptom-free and has been so for about 12 weeks. She still has some ringing in the right ear, but the remainder of the syndrome is lacking. She has returned to her work and is economically useful and physically improved.

Case 2.—A white female, aged 45, married, complained of paroxysms of ringing in the right ear and dizziness and nausea, followed by vomiting. These attacks began about 1 year before the first visit to the clinic. They have been increasing, not in severity, but in frequency, to the present time. These attacks were so severe and came on so suddenly that at the onset the patient was obliged to lie face down on the floor as quickly as possible to escape falling and possible injury. The vertigo was subjective, and the patient stated that she seemed to be spinning from left to right. The attending nausea was severe and withal the attacks incapacitated the patient. The average was about 1 attack every 2 weeks. There were no accompanying headaches, nor was there any change in vision. The ringing in the ear seemed to the patient to cause some decrease in hearing. She had been in good general health until the onset of the above illness. There had been no accidents nor operations.

The patient was obese, weighing 135 pounds (61 Kilo.). The blood pressure was 130/80. The general physical examination was essentially negative. The ocular fundi showed no retinal arteriosclerosis and no papilledema. Examination of the perimetric fields revealed no defects. The membrani tympani were negative. Hearing in the right ear was reduced grade 1 on a basis of 4.

Urinalysis and blood studies, including a blood Wassermann reaction, were negative. A roentgenogram of the skull showed no evidence of increased pressure.

Neurologic examination showed the central nervous system to be objectively negative. There were no pathologic reflexes, no corneal anesthesia, and the patient could recognize trace figures on the right side of the face.

This patient was given 2 milligrams of histamine acid phosphate in 250 c.c. of normal saline intravenously and placed on the Furstenberg type of diet. There has been no recurrence of the dizziness or nausea, but there still remains a slight ringing noise in the right ear. This patient has been followed now for 2 months and there have been no recurrences.

COMMENT

While Ménière's syndrome is looked upon as a disease entity recognized most frequently by neurologists, it is composed of some of the common complaints which cause patients to seek the advice of the internist, i.e., ringing in the ears, vertigo and nausea. The treatment, as outlined by Shelden and Horton, is not a simple procedure, but can easily be carried out in most well equipped offices, or the patient may be hospitalized.

In the two cases reported, there were no untoward reactions, and both patients remarked immediately about the improvement in the feeling of the ear. They have been followed 3 and 2 months, respectively, and neither has had recurrences. This treatment marks a great advance in the therapy of Ménière's disease, because not only are the results more uniform but the procedure is not time-consuming and the period of disability is reduced.

Hollingsworth Clinic.

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Male sex hormone gives relief for premenstrual discomfort. Prolonged and intense discomfort preceding menstruation followed by profuse and prolonged bleeding was relieved by the administration by mouth of the male sex hormone, testosterone propionate, Robert B. Greenblatt, M.D., Augusta, Ga., reports in *The Journal of the American Medical Association* for July 13, 1940.

He cites the cases of two patients in whom the hormone relieved premenstrual headaches, nervousness, abdominal pain and bloating, general discomfort, lumpy and painful breasts, fatigue and crying spells. The bleeding cycles also became more regular and the amount and length of the flow were decreased, in one instance from twelve to four days.

Dr. Greenblatt contends that the relief obtained by his patients warrants further trial of this method of treatment not only for the harrassing and distressing advance symptoms but also because with the onset of menstruation the tense, nerve-wrought and weary patient is further weakened by her excessive loss of blood.

MEDICAL ANNALS

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EDITORIALS

ORGANIZING MEDICAL RESOURCES

Late in May when events abroad shocked the people of this country into the realization that we might have to defend ourselves, the Secretary of the Medical Society conferred with the Surgeons General of the Army and Navy in regard to their plans. With the approval of the Executive Board, he informed them of the Society's desire to coöperate in every way possible. However, plans were still in the developmental stage and it was agreed that the Society would be called upon as soon as its services were needed.

Shortly thereafter, the annual meeting of the American Medical Association was held in New York. At sessions of the House of Delegates consideration was given to a program submitted by the Surgeon General of the Army. However, no action was taken upon this program pending study by the Committee on Medical Preparedness created by the House, to which the following appointments were made.

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Dr. Morris Fishbein, Chicago, *Editor, Journal of American Medical Association*

This committee was created to "establish and maintain contact and suitable relationship with all governmental agencies concerned with the prevention of disease and the care of the sick, in both civil and military aspects, so as to make available at the earliest possible moment every facility that the American Medical Association can offer for the health and safety of the American people and the maintenance of American democracy." The immediate task of the committee will be to conduct a survey of the medical profession of the United States for the purpose of ascertaining the manner in which each physician will participate in the preparedness program.

The *Journal of the American Medical Association* announces that it will publish a section on medical preparedness each week. The first appeared in the June 22 issue. Official notices issued by the Association's Committee on Medical Preparedness, together with announcements by the Surgeons General of the Army, Navy and Public Health Service and other governmental agencies dealing with medical preparedness will be published in this section.

It is understood that state medical societies will take a vital part in the preparedness program. Many are already organizing themselves for participation. The Executive Board of the Medical Society of the District of Columbia has created a Committee on Medical Resources. To this committee has been assigned the task of aiding with local medical preparedness plans. Among other things, it will, in the event of an emergency, render every assistance possible to physicians who enter military service as well as to those who, for one reason or another, remain at home. It will also give its attention to the needs of the civilian population, whose interests must be safeguarded. Members of the new committee are the President of the Society, the Chairman of the Executive Board, and the Secretary.

Needless to say, it is hoped that there will be no need to mobilize the medical profession, here or elsewhere, but there is no longer any question about the necessity for being prepared. Officials of the Medical Society are certain that they can count upon the coöperation of all physicians in the District of Columbia.

DANIEL LE RAY BORDEN, M.D., F.A.C.S.

Dr. Daniel Le Ray Borden, seventy-fourth President of the Medical Society of the District of Columbia, took office on July 1, 1940. Dr. Borden is well known to the medical profession in Washington as an able, conscientious physician who has had a distinguished career.

Dr. Borden was born at Fort Douglas, Utah, October 25, 1887, the son of William Cline Borden and Jennie Adams Borden. His father was former Dean of the George Washington University School of Medicine, a post which he held from 1908 to 1930, and Lieutenant Colonel in the United States Medical Reserve Corps.

Dr. Borden received his Bachelor of Science and Master of Arts degrees at George Washington University. The degree of Doctor of Medicine (With Distinction), he received at the George Washington University School of Medicine in 1912.

Shortly following his graduation from medical school, he became a Lieutenant in the United States Medical Reserve Corps, serving in the Mexican campaign in 1914. Later he saw service in the World War. During the War he was assigned to Walter Reed Hospital, Camp Taylor, and later to France, where he was Chief Surgeon of Evacuation Hospital No. 18. At the close of the War he had risen to the rank of Lieutenant Colonel.

Upon his return to Washington he engaged in private practice, limiting his work to surgery. At present he is Attending Surgeon at Emergency and George Washington University Hospitals and Consulting Surgeon at Children's Hospital. He is also Associate Professor of Surgery at George Washington University School of Medicine and Chairman of the Medical Board of Licensure of the District of Columbia.

Dr. Borden has been honored by many medical organizations in Washington. He is Past President of the George Washington University Medical Society, 1929–30, Past President of the George Washington Alumni Association, 1932–33; Past President of the Academy of Surgery of Washington, 1938–39. He has held a number of important posts in the Medical Society of the District of Columbia, having been chairman of several committees and a member of the Executive

DANIEL LE RAY BORDEN, M.D., F.A.C.S.

President, The Medical Society of the District of Columbia, 1940–1941

Committee. In 1939 he was elected President-elect of the Medical Society of the District of Columbia. During the past year he has been a member of the Executive Board, to which his faithful attendance and wise counsel have been of the greatest value.

Dr. Borden is a Fellow of the American Board of Surgery, a Fellow of the American College of Surgeons, a Fellow of the American Medical Association, a member of the George Washington University Medical Society, a member of the Hippocrates-Galen Medical Society (retired), and a Fellow of the Southern Surgical Association.

Dr. Borden has been a contributor to many medical journals, among them the *Journal of the American Medical Association*, *Annals of Surgery*, *Urologic and Cutaneous Review*, *American Journal of Surgery*, and *Medical Annals of the District of Columbia*. He has also been a pioneer in using motion pictures for scientific purposes. Several of his pictures have been shown before the Medical Society, the first one in 1917.

Mrs. Borden is the former Pauline S. Stone of Washington. The Bordens have three children: William Liscum, now a student at Yale; Charles Stone, at Harvard; and Richard Le Ray, at St. Albans.

Dr. Borden's many friends know him as a modest practitioner who has the welfare of the medical profession at heart. If it is true that the hobby discloses the man, it will be of interest to those who do not know Dr. Borden to learn that he is a fresh-water sailor. He enjoys the out-of-doors and is a devotee of sailing. An outdoor enthusiast as well as a scholar, he should give the Society the common sense and vigorous leadership which it needs in these times.

THE AUXILIARY LENDS A HAND

It is not surprising that members of the Medical Society need to be reminded of the good work being done by the Woman's Auxiliary. Physicians, like other men, are prone to take the things that their wives do for them for granted. They may appreciate their ability and the efficiency with which they discharge their duties, but somehow it becomes so much a part of their daily existence that they fail to express their appreciation.

The Woman's Auxiliary really deserves more credit and recognition than it has received. It is a pleasure to record in these columns the activities of the Auxiliary, under the leadership of Mrs. Robert M. Bolton, who has been President during the past year. Among these has been the work of the Committee on Public Relations, under the chairmanship of Mrs. Walter Atkinson. This committee has assisted in placing speakers listed with the Medical Society's Speakers' Bureau. It has contacted the presidents or chairmen of 27 organizations and all presidents and health chairmen of the local Parent-Teacher Associations, acquainting them with the fact that speakers are available on a variety of subjects. This committee also sent a letter to every member of the Auxiliary, requesting assistance in placing speakers on programs of associations to which they belong. While a number of speakers were placed this year, it is felt that the results of this work will be more apparent in the coming year.

Another Medical Society project in which the Auxiliary is assisting is the reconditioning of the library in the Medical Society Building. The sum of $245 has been set aside to be applied to this project, when the decision has been made as to what is going to be done in the library.

The Medical Society has planned a Hobby Show in connection with the Annual Scientific Assembly to be held in October. The Auxiliary has agreed to coöperate in this undertaking also. Mrs. Thomas Neill has accepted the chairmanship of a committee to work with the Society's Subcommittee on Woman's Auxiliary Liaison and the Hobby Show, and Mrs. Daniel L. Borden, the incoming President, is actively lending her coöperation. The Auxiliary is underwriting the Show up to $250.

It is quite edvient that the Woman's Auxiliary is fulfilling most adequately its function as an aid to the Medical Society. To the Auxiliary, therefore, the Society owes a debt of gratitude.

PERTINENT PARAGRAPHS

June Meetings

Several committees continued to function during the month of June. A few were endeavoring to complete the tasks which they had undertaken before the appointment of new committees on July 1; others were laying plans for their fall and winter activities. The following meetings were held:

June 4	Joint Meeting of Committee on Public Health and Subcommittee on Venereal Diseases
June 5	Medical Bureau Committee
June 6	Committee on Cancer Control
	Subcommittee on Auxiliary Liaison and Doctors' Hobby Show
June 17	Obstetrical Board
June 20	Committee on Public Health and Subcomittee Chairmen
June 21	Grievance Committee
June 24	Executive Board
	Subcommittee on Sports
June 25	Subcommittee on Finance
June 27	Subcommittee on Auxiliary Liaison and Doctors' Hobby Show

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Committee Appointments 1940–1941

Appointments to committees by the incoming President became effective on July 1. The personnel of committees for the ensuing year will be found on pages v and vi of this issue of the MEDICAL ANNALS.

Those familiar with the Medical Society's activities will be impressed by the names of a number of physicians who have not previously served, or who have not been active for some time. As will be observed, there has been no duplication of names on committees, a plan permitting as many as possible to become active.

If members appointed this year serve as faithfully as those who preceded them, the Society will, despite trying conditions, make very satisfactory progress.

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A.M.A. Meets in New York

Nearly 13,000 physicians registered at the annual meeting of the American Medical Association held in New York, June 10 to 14. It was the largest meeting in the Association's history, and in many respects the most momentous.

Reference has been made elsewhere in this issue to sessions of the House of Delegates. One could not escape the feeling that members of the House were so occupied with events abroad and their implications for this country that they had little enthusiasm for other matters. However, many important actions were taken, as those who wish to inform themselves will learn if they read the minutes of the House of Delegates which are published in the June 22 and 29 issues of the *Journal of the American Medical Association.*

Registrations as usual were published in the *Daily Bulletin.* The Medical Society of the District of Columbia was well represented, a number of its members participating in the scientific program and otherwise taking an important part.

The technical and scientific exhibits were particularly fine this year, occupying four floors of the Grand Central Palace. Much credit is due the Medical Society of the State of New York, the Medical Society of the County of Kings, and the Academy of Medicine of Brooklyn for the arrangements which they had made to care for and entertain the vast army of physicians and their wives in attendance.

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War and Politics

Wherever people gather in Washington these days, there is pessimistic talk of war and politics. Some of it is amusing. Most of it is not. There are those who revel in dire predictions which leave their more sensitive fellow-beings in a state of despair. Others are realistic but exude confidence, and, of course, there are confirmed optimists.

Undoubtedly, newspapers have done much to stimulate this discussion, for in Washington, at least, they seem to contain little but war and political news. It is a pretty stiff diet for their readers. One frequently hears the remark, "I don't read the papers any more because they upset me," or, "The news makes me feel sick." Surprisingly, the people who make these remarks are those one would be the last to expect would do so. Among them are men of prominence, intelligence and undoubted courage.

This situation is of importance from a medical viewpoint. Physicians will undoubtedly see more patients suffering from functional disorders than they have in the past. Sympathetic understanding and patience will be required in dealing with them so that they will acquire the poise and commonsense outlook so necessary in these times. An obligation, therefore, rests upon doctors to recognize and meet this situation adequately.

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Cancer Control Program

At a recent meeting of the Cancer Control Committee, consideration was given to a year-round cancer control program. Hitherto, the committee has sponsored jointly with the Women's Field Army of the District of Columbia a campaign during the month of April only. It was the decision of the committee that a permanent program was desirable, and the following plan was adopted and referred to the Executive Board for its action:

1. Effective cancer control will include provisions for (1) health education, (2) preventive diagnostic clinics, (3) tumor clinics, (4) surgical biopsy service, (5) laboratory service, (6) X-ray, radium, etc., (7) adequate medical social and nursing follow-up of suspected and known cases.

2. Lay groups (the Women's Field Army, Federation of Women's Clubs, Parent-Teacher Associations, Washington Council of Social Agencies, civic bodies, service clubs and other lay organizations) and the medical and dental professions (white and colored) should actively participate in a continuous anti-cancer program, culminating in special anti-cancer activities during the Cancer Control Campaign (April).

3. The Health Department is the official agency in the District of Columbia for the preventive work of the community and the medical care of the indigent.

The medical and dental professions, hospitals and private clinics are non-official agencies engaged in preventive and curative work within certain limitations, depending upon the purposes and responsibilities of the individual body or organization.

4. The Health Department will install a Bureau for Cancer Control (as it has done for Tuberculosis, Venereal Disease, Maternal and Child Welfare, Pneumonia and Dental Services) as an integral part of its organization.

5. There will be an advisory council on cancer control to the Health Officer, composed of physicians, dentists, hospital executives and representatives of the Women's Field Army.

6. It is recommended that the medical and dental societies maintain cancer committees to guide the parent organizations in cancer control activities, from which also appointees to the health officer's advisory committee may be selected.

7. Health education activities will be actively promoted in the several organizations, according to machinery set up in such organizations, in close coöperation with the Health Department.

8. Close coöperative relationship will be maintained with the American Society for the Control of Cancer, with particular reference to health education activities and work of the Women's Field Army.

9. The Health Department will establish a tumor clinic at Gallinger Hospital with adequate facilities for biopsies, pathological diagnosis, X-ray diagnosis, and treatment of indigent resident cases.

10. Effort will be made to assist private hospitals, particularly with indigent patients, to adequately care for same, if and whenever request is made for such assistance.

11. The Health Department through its regular clinic and hospital services will attempt to screen all patients applying for care to determine whether or not these may have some form of malignancy.

12. Medical social clearance will be made of patients with presumptive malignancy, to determine whether or not these patients will be routed for care under government expense or by private physicians, depending upon their ability to pay.

13. It is suggested that, in order that there may be unity of purpose under 11 and 12, private hospitals,

clinics, physicians, dentists and other agencies adopt similar procedures.

14. Provision will be made for adequate medical, social and nursing follow-up of suspected and known cases of neoplastic disease.

At a meeting on June 24, 1940, the Executive Board gave its approval to the above program.

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Study Group for Physicians' Secretaries

The desirability of organizing a study group for physicians' secretaries has been suggested. If carefully planned and the subjects properly presented, much, it is claimed, could be gained by discussion of efficient office methods. Experts in various fields, such as accounting, insurance and law, might be obtained who would contribute worthwhile ideas. There would also be an opportunity for those who attend to participate in the discussion by presenting their views or describing the methods used in their offices. If there is sufficient interest in the organization of such a group, it will receive serious consideration. Communications in regard to this matter should be directed to the Committee on Medical Economics, 1718 M Street, N. W., Washington.

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Sports Tournaments

Returns which have been received, the Subcommittee on Sports announces, justify proceeding with plans for golf and tennis tournaments.

A Fall Tennis Tournament is definitely scheduled. Registrations for the tournament must be received at the Society's office not later than September 15. Those who wish to take part should, therefore, return the form which was recently sent them as soon as convenient. The place at which the finals will be held has not been decided upon.

The first Physicians' Golf Tournament will be held at the Burning Tree Country Club on September 19. Tickets for the tournament will be $5.50 each, covering the green fees and the dinner, at which a 12-ounce steak will be served. There will also be numerous prizes for the average as well as the expert golfer.

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Art Work by Physician

Last month in these columns attention was called to the unique hobby of a Society member who restored paintings. Closely related to this is the avocation of another physician, Dr. Francis G. Speidel, who is not only a practitioner of medicine but a talented artist as well. Dr. Speidel is widely known throughout the profession for his original works of art. The MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA is indebted to Dr. Speidel for the drawings which appear in this issue on the President's Page. These add much to the appearance of the ANNALS. It is hoped that Dr. Speidel can be prevailed upon to contribute to future issues.

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Medical Bureau

Another canvass of the Society membership was recently made in connection with the MEDICAL BUREAU, the 24-hour telephone secretarial service which the Society proposes to establish. Contracts are being received daily and it is expected that before long a number sufficient to permit operation will have been obtained. Those who are interested in the BUREAU should return the contracts sent them promptly, since the Medical Bureau Committee is anxious to complete the membership roster as early as possible.

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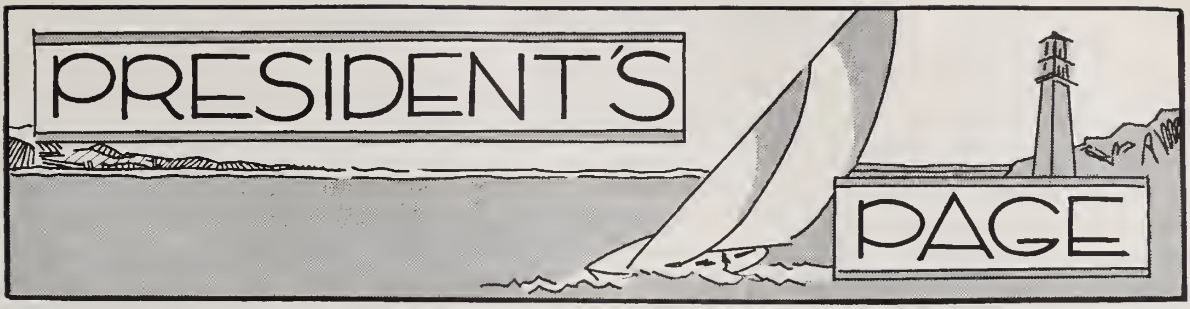
Trial Date Decided Upon

Trial of the American Medical Association, The Medical Society of the District of Columbia, Harris County Medical Society (Texas), Washington Academy of Surgery, and the twenty-one individual physician defendants in the District Court has been set for October 21.

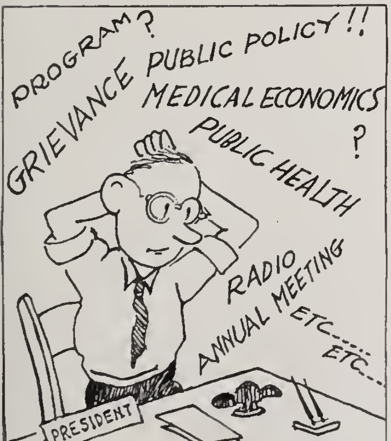


ANCHORS AWEIGH!

Facing one of the most critical years of its existence, the Medical Society of the District of Columbia enters into 124 years of service. Of special importance at this time is the trial of the Federal Government's Anti-trust case against our Society. During the coming months the Executive Board, all committees and individual members involved together with our attorneys will be working in preparation to determine the legal issue that we must face during the first part of this administration.

World events, with their implied uncertainty, find the Society approaching other problems of major potentiality. In the event of a national emergency, your Society, in keeping with its past history and tradition, stands ready to serve our country. We are in step with America in its program of defense.

It has been the duty of your President, as President-elect, to attend the Executive Board meetings of the past year to get his hand on the pulse of the Society. During the past months it has been necessary to select and recommend to the Executive Board the names of members who will make up the personnel of committees of the Society for the coming year. As a matter of policy, it has seemed advisable to limit the appointment of an individual to one, and only one, of the standing and special committees. Since more than 160 appointments have been made, it can be readily understood that a large part of our membership is being called upon to carry on the fundamental business incidental to our large organization. There always lingers the thought that excellent material has been held for future service.



With the help of our entire membership, I pledge my greatest effort to support and maintain the Constitution and By-laws of our Society and to execute the duties of my office to the best of my ability.

Daniel Le Ray Borden

MEDICAL AID FOR THE NEEDY*

Honorable Robert A. Taft
United States Senator from Ohio

The worst cases of hardship which we have to deal with are those produced by sickness, and particularly where sickness is aggravated by poverty. Nothing arouses our interest and sympathy so much as movements of all kinds to prevent and relieve the suffering produced by illness. It is all the more essential that the measures which we take be carefully thought out; that they be based on sound principles and not on an emotion so easily aroused. I believe that government should do more to furnish medical aid to the needy than is now being done. But I also believe that unless it is properly planned, it in the long run may do more harm than good.

There is no question which concerns the medical profession more today than that of medical aid for the needy, and the extent to which government shall enter into the field. We have before us in Congress today the Wagner Health Bill and many other proposals to spend government money in connection with health activities. Great emphasis has been laid on assertions that health care in America is inadequate. There have been signs of an organized propaganda to socialize the whole field of medicine.

There is no new principle involved in the extension by the government of medical aid to the needy. Every state in the Union has considered that field as a proper one for government activity. Public health work, particularly in the prevention of communicable disease, has been undertaken without question or doubt. In the field of hospitalization, nearly all the states and many cities have provided free general hospitals, and other hospitals for the mentally ill, the tubercular, the epileptics, and other special groups. In connection with general hospitals, the local governments have long provided free medical care in greater or less degree. The larger field of providing medical care to the needy in their homes has been more difficult to deal with, and has not been undertaken to any great extent.

Of course, free medical aid to the needy has also been the function of private charities and private hospitals. Even more has free aid to the poor been given in tremendous volume by the medical profession itself, the financial value of which is impossible to estimate. All of us have known the typical American family doctor, ready to go to any call at any time of day or night, by horse and buggy, by Ford car. He refuses no service because the patient cannot pay for it. He forgets to send his bills, or he makes no effort to collect them. The nation cannot repay, and is not asked to tax itself to repay, the services which have been so generously donated by thousands of doctors.

It is probably true that health work has not been very systematically organized to reach every possible citizen. It has been to some extent a patchwork of public and private charity, but it is also true that the field has been well covered in most parts of the United States. Few persons who are really sick have been unable to obtain proper medical care. It is hard to believe the general conclusions of the Interdepartmental Committee when we find that the health of the nation has never been as good as it is now. This Interdepartmental Committee to Coördinate Health and Welfare Activities of the federal government was a typical New Deal set-up, created to justify and publicize a preconceived plan for extending federal control over the whole problem of health. Its reports exaggerate the need, and try to present a picture of neglect and medical inefficiency, which is very far indeed from the truth.

As a matter of fact, the accomplishments of medicine in the United States in the past fifty years have been extraordinary, and have not been exceeded in any other country in the world. The average expectancy of life has been lengthened by twelve years between 1900 and 1937. The death rate has fallen to 11.2, which compares favorably with any of the large nations of the world, and there is still a steady improvement. There are more doctors per population and more hospital beds per population than in any other country. Undoubtedly there is plenty of room for improvement. I venture to think, however, that the difficulty is a social difficulty, and arises much more from the inadequacy of the income of millions of families than it does from any faults in the medical profession or lack of medical facilities.

I have pointed out that there is nothing revolutionary in the proposal that the government provide medical care for the needy. In the same way we have long recognized that government must provide poor relief, and must see that none of its citizens go without adequate food or clothing because of inadequate income. Every state has laws which provide for such relief by cities or counties. Many states, even before 1933, adopted old age pension systems. It has always been recognized, however, that wholesale public aid to large groups of citizens contains certain dangers which must be dealt with. It is easy for people to develop an attitude of mind in which they do not make a sufficient effort on their own account. Such an attitude is demoralizing to the recipients of aid, and if the principle is expanded in practice until it becomes a dole to great masses of the population, without adequate safeguards, it may well demoralize an entire nation.

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* From an address given before the Ohio State Medical Association, Cincinnati, Ohio, May 16, 1940.

The need for medical aid is more difficult to judge than the need for food and clothing. Therefore, without care, a medical dole may become even more demoralizing. The expense is also very considerable, and unless restrained will become a tremendous tax burden. The proper and natural sympathy for the unfortunate leads to a steady increase in cost once the work is undertaken. This has been true in relief, and is likely to be true in the medical field.

In short, the program must be undertaken with care and with economy. After all, the only people who can pay for this aid to the needy are those who are working at or about the same time. With the tremendous scale of government expenditures in all fields today, additional taxes cannot come from the wealthy alone, but must be spread over the entire population. The confiscation of all income over ten thousand dollars a year would not pay our present tax bill for six months in any year. The average workman today pays 15 per cent of his income in taxes. We cannot make the tax burden so great as to discourage him from the very enterprise which must pay these taxes. And yet the average workman, as well as those of our people better off than the average, are and should be willing to contribute the small additional percentage necessary to help those unfortunate families whose suffering otherwise may be insupportable.

There has always been free medical aid to the needy, and it should be more systematically organized, and government should spend more money on it than is spent today. But should that money be spent by the state, local or federal government? What principles should govern the increased government aid?

HEALTH INSURANCE

There is one substantial difference between relief and medical aid. Many families are perfectly able to pay their ordinary expenses, and should be able to pay for medical care, and yet when they run up against an emergency of sickness they have no reserves with which to meet it. Such families should not have to be supported by taxes paid by other families less able to bear the burden than the family which is assisted.

In order to avoid the necessity of extending free medical aid to many more families than actually require it, it is desirable to develop some form of health insurance. Families of intermediate income ought to be able to put aside a weekly amount which will insure them adequate medical aid in any emergency. All kinds of experiments have been made, and there is not much doubt that we will develop satisfactory voluntary plans, though I claim to be no expert on the subject. Men have shown their willingness to pay premiums for life insurance. If they are willing to set aside money to pay the undertaker, they ought to be willing to set aside money to pay the doctor.

But compulsory health insurance is another thing. Deductions from payroll or otherwise to support compulsory health insurance really destroy the whole character of the plan as insurance. Such payments are in fact taxes, and they are shortly absorbed in costs and passed on as taxes to all the people. The assistance which is received comes finally from a government bureau. Look at the payroll taxes we already have for unemployment insurance, so heavy and complicated in administration as to hamper and restrict the development of private industry and increase unemployment. Health insurance should certainly be developed on a voluntary basis.

Furthermore, it should provide for the right of the insured to select his own physician, if his physician is willing to enter into the general plan. There should be no government doctors on a fixed salary, taking care of as many cases as the government chooses to assign to them.

SOCIALIZATION OF MEDICINE

The socialization of the medical profession is a danger which must and can be avoided in any extension of medical aid to the needy. If that aid is confined to the needy, the danger is not so great, but even then methods can certainly be developed to give the man entitled to government aid the right to choose his own doctor and have him paid by the government. We have such a plan for workmen's accident insurance in Ohio.

But if the government undertakes to cover the whole field, and extend aid not only to the needy, but also to those quite able to pay for it, there is real danger. Compulsory health insurance for all employees, similar to unemployment insurance, would gradually result in a large proportion of the total payments to doctors coming out of the government fund. In effect, the bulk of the medical profession would be employed by the government. That is socialization of medicine. We might try to guard against it by provisions allowing the patient to choose his own doctor, but it is not likely that we could long maintain such a restriction. Once a profession is paid with government money for the bulk of all its work, it takes its orders from the government. Gradually most doctors would come to be in effect government employees. Nothing like that has ever happened to a profession in this country. The American system has been built on independent business men, on independent farmers, and on independent professional men, particularly lawyers, doctors, scientists and professors. Much of the independent thought has originated with professional men. They are largely responsible for the great creative accomplishments of the last century which have so tremendously increased the living standards and happiness of the people. In surgery, in preventive medicine, in methods of treatment, in bacteriology, the steady growth of new ideas has come from an independent profession. In spite of unfortunate exceptions, the average professional man does his own thinking, and is less subject to the influences of power and propaganda than any other group of the people. In a socialized world, not only does the government regulate all prices, wages, hours and practices, but it employs all the doctors, lawyers and scientists. The world becomes a great bureaucracy, and a progressive democracy dies through hardening of its arteries.

I have said that our difficulties today are rather social than they are medical. It is essential that we confine our free medical care to those who are really needy; that we treat the problem as a relief problem, and work out the difficulties of the intermediate income groups through plans of voluntary coöperation.

PLACE OF THE FEDERAL GOVERNMENT

The specific proposals under discussion today relate to the activities of the federal government in the field of health in its attempt to improve general social conditions of the country. From a health standpoint alone, there is little justification for the federal government concerning itself in a field which has always been recognized as one for local government. But during the past ten years we have come to realize that the resources of the local governments to deal with relief and other aid to the needy are inadequate, and that federal financial aid is absolutely essential. The depression of 1929 created a great unemployment problem which has never been solved.

We thought that in America any man who was willing to work could get a job and support his family—even take care of his old age. But we found we had not achieved that millennium. We found, furthermore, that the cost of proper care for the needy was so great that it could not be provided by the states and local governments. They had limited powers of taxation. They could not tax the wealthy without the wealthy moving to other states. They could not tax local industry without discouraging its development in that locality. Most of the state tax systems were heavily burdened to provide for the normal activities of cities, school districts, counties and states.

And so the federal government was called upon to give financial aid to activities which under our Constitution have always been regarded as of state or local concern. In the field of relief the federal government, as a condition of financial assistance, and I think, very wrongly, insisted on taking over most of the administration, instead of assisting the states to do the task which was really theirs. The federal government has undertaken to assist in ordinary relief, in old age pensions, unemployment insurance, and housing. Its assistance has been sought and given simply because the states have not been able to raise the money to handle the social distress of many million families.

I believe that the federal government should also aid to some extent in the field of medical care for the needy, and for the same reason. That field has not been largely developed by the states, and in most cases the financial provision has been inadequate. Historically the bulk of local and state tax funds were allotted to the schools, the roads, and other activities of more immediate local demand than relief. On the other hand, we should certainly recognize that many states do provide a large measure of medical aid, and have always done so and provided the funds for it. The states which have not provided any funds should do so before leaning on the federal government. Federal aid should be merely auxiliary—even more so than in the field of relief, old age pensions, and unemployment insurance, in which fields the states had made almost no provision in their tax systems. Each state should be encouraged to work out its own problem in its own way, the federal government merely providing funds to supplement state funds and encourage an orderly and comprehensive plan.

But the dangers of extending free medical aid in the wrong way are intensified when the federal government enters the field. At least under the present administration, there is not the slightest conception of the necessity for economy. They don't seem to realize that sooner or later the whole people, rich and poor alike, have to pay for what they spend. What is the validity of the argument that the federal government can afford to pay when the states cannot, so long as the federal government is four billion dollars a year in the red? Why complain of the inadequacy of state tax systems when no one has the nerve to devise a federal tax system to pay the federal bill? Furthermore, if all health control is centered in Washington, the whole nation may be suddenly subjected to experiments proposed by any group of cranks who may obtain the ear of the Executive or Congress. Socialized medicine is only one of the changes which might be effected overnight because someone knows where to apply pressure at the right spot. Even greater care is necessary in extending federal aid to health than in the case of local and state government.

The Wagner Health Bill, in particular, seems to me an extraordinarily dangerous way of dealing with the whole subject. It is true that it purports to be a mere assistance to states which set up the proper plan. But, in the first place, it is immensely complicated. It provides aid in six different categories—two categories of maternal, infant and child health under the Children's Bureau; two, of public health work and hospitals, under the Surgeon General; and two, of general medical care and health insurance, under the Social Security Board. Each state is required to set up six elaborate advisory committees, and deal with three different departments and six different bureaus of the federal government.

The bill is typical of New Deal technique. Whenever an abuse occurs or a need arises in any field, the only solution which the New Dealer offers is a complete regulation and supervision of every detail of that field by the federal government. In the Securities and Exchange Commission, in the National Labor Relations Board, in the Wage-Hour Administration, we see great bureaucratic machines set up, on the theory that you must remedy every evil by giving a government bureau discretion to pass on every act in advance. Bureaus are created and given power to issue regulations increasing their own power. Instead of the law prohibiting certain definite actions which have produced bad results, and giving the federal bureau power to enforce, the law gives the bureau arbitrary and discretionary power to tell the industry concerned just how it must run every detail of its business.

So also in this health field. Instead of picking out a particular problem, and attempting to relieve that problem with some federal financial assistance and a suggestion to the states as to how with that assistance they can eliminate a serious evil, the Wagner Health Bill proposes to blanket the whole field with an expenditure of $275,000,000 a year, increasing gradually to $800,000,000 a year. It encourages compulsory health insurance. It provides the funds with which the state, otherwise unable to do so, may socialize the entire medical profession.

In my opinion, each step taken by the federal government should be taken with care and to meet a demonstrated need. There should be an effort first to encourage the states to develop sound methods of medical aid to the needy, and the demand for federal assistance should come from the states instead of that assistance being forced upon them.

Our Senate Committee on Education and Labor has just recommended one step which I think is sound, which illustrates the manner in which the federal government should proceed. We are proposing to appropriate ten million dollars a year for several years to assist the states to build small hospitals in rural sections where those hospitals do not exist. The amount involved is not sufficient to permit any considerable development except where it is very badly needed. The appropriation, one-tenth of that proposed in the Wagner Health Bill, for hospitals should have an equal effect in encouraging states to survey their entire hospital situation and work out a comprehensive plan. The money provided is not sufficient to encourage any competition with existing private facilities. The Wagner Health Bill apparently contemplated a State Plan in each state, entirely disregarding the extensive hospital facilities which ought to be considered in working out any plan of hospital aid for the needy. It is rather interesting that the original little hospital bill proposed by the President contemplated the construction of a chain of federally-owned hospitals with W.P.A. labor. As finally worked out at my suggestion, all the hospitals built are to be transferred to the state, and operated as part of a state or local system. The construction is to be made by contract in the usual way, and some aid is to be given towards maintenance during the first five years. It is an experiment, but it should meet the hospital problem to the extent, and in the places, where the need really exists.

In the same manner in which the hospital problem has been met, I believe that Congress should consider as soon as possible the appropriation of federal money to assist in the development of direct medical aid for the needy. I would like to see specified in the bill the kind of aid which the state and local government shall give. I would like to see the assistance so restricted that the funds could not be used towards the general socialization of the medical profession. In my opinion, we owe a duty to the unfortunate members of society who, without fault of their own, or even perhaps with fault of their own, are unable to provide a decent living for their families. We owe the children of such families an equal opportunity to make a success of their own lives. They cannot do so in a family overwhelmed by poverty and illness. No system will work to relieve all hardship. No system will be 100 per cent perfect. But I believe that at a reasonable cost the federal government can stimulate interest and assist the development of plans that will reduce the hardships of many unfortunate families. In a federal budget of seven billion dollars, the ultimate expenditure of several hundred million dollars a year to supplement the work of states, of local communities, and of private charity, does not seem to me an unreasonable sum in comparison with the tremendous good which it can do.

The medical profession in the last hundred years, increasingly in the last generation, has worked miracles. Preventive medicine has checked and destroyed epidemics, and lengthened the span of years. Surgery saves thousands of lives annually. The lives of mothers and infants are more secure. Now we are concerned that society shall be able to share these boons with all; that children be freed of physical handicaps; that the usefulness of the middle-aged be prolonged; that old age be made more comfortable. We all desire that pain, the universal enemy, be frustrated; that we achieve a happier, healthier America.

But let's do it in the right way. Let's not do it at the cost of the independence of the medical profession, which has given so unselfishly of its time and talents. Let's not do it in a way which will only give the needy the kind of treatment a poor citizen gets from a government bureaucrat in Washington. No human suffering should go unheeded. But let us see to it that self-reliant Americans retain their freedom to coöperate voluntarily in health insurance plans if they want to, and their liberty of choice in the matter of the family doctor. We want an America free as well as healthy. There is no necessary contradiction.

MAKE YOUR PLANS NOW TO ATTEND THE ANNUAL SCIENTIFIC ASSEMBLY, OCTOBER 15, 16 AND 17

REPORT OF DELEGATE ON PROCEEDINGS OF THE HOUSE OF DELEGATES OF THE AMERICAN MEDICAL ASSOCIATION AT THE NEW YORK CONVENTION, JUNE 10-14, 1940

At the ninety-first meeting of the American Medical Association recently held in New York, the sessions of the House of Delegates were diligently attended not only by your official delegate but by the Chairman of the Executive Board, Dr. F. X. McGovern, and by the Secretary, Mr. Theodore Wiprud. In effect, this arrangement provides for multiple representation by our Society, and for the past two years it has proved of great advantage. As long as the present apportionment of delegates prevails, the number of our active membership will not likely give us the right to more than one delegate. The deliberative work of the House of Delegates is done in the meetings of the Board of Trustees and of the various reference committees, which usually meet at the same time in as many different places as there are committees. Often matters of interest to our Society are under discussion in several committees while your delegate is busy with the work of one committee to which he may have been assigned as a member. Thus the presence of other representatives to attend hearings elsewhere permits the expression of opinion from our Society when desirable and brings timely notice of contemplated recommendations to your delegate in time for conference and consideration before the committee reports are presented to the House for vote.

The session just completed was marked by the harmony and expedition with which the work of the House was transacted. Reference committee reports were almost without exception adopted without dissent; and the election of Dr. Frank H. Lahey as President-elect was by acclamation, as were the elections of the other general officers and trustees. The only new name to be found in the Board of Trustees is that of Dr. William F. Braasch of Minnesota, who was chosen to serve the unexpired term of the late Dr. Charles B. Wright.

The most important action of the House of Delegates was the adoption of resolutions presented by the Board of Trustees, which, in effect, put all the facilities of the American Medical Association at the disposal of the government for mobilization of the medical profession and authorized the creation of a Committee on Medical Preparedness, consisting of officers of the A. M. A. ex officio and ten members of the House of Delegates. The personnel of this committee will be found on page 243 of this issue of the MEDICAL ANNALS. It will be noted that the ten appointed members of the committee have been selected so as to represent all sections of the country.

It is hoped that all of the Society members will read the proceedings of the House of Delegates as they appear in the *Journal of the American Medical Association* from week to week.

HENRY C. MACATEE, M.D.
Delegate

RADIO PROGRAMS

Following is a list of the programs which the Committee on Radio Education has presented over Station WMAL each Tuesday for the past four months:

March 12: "Dental Progress" (D. C. Dental Society)
March 19: "Fear"
March 26: "Enjoying Poor Health"
April 2: "Mistaken Beliefs and Their Relation to Disease"
April 9: "Dental Decay" (D. C. Dental Society)
April 16: "Diet and Health"
April 23: "Mental Hygiene"
April 30: "Blood Pressure"
May 7: "Vaccines and Serum"
May 14: "Typhoid Fever"
May 21: "Five-State Dental Meeting" (D. C. Dental Society)
May 28: "Poison Ivy"
June 4: "Unnecessary Noise"
June 11: "Tick Bite Fever"
June 18: "Gall Bladder Disease"
June 25: "Poisonous Plants and Animals"
July 2: "B. M. R." (Basal Metabolism Rate)

NEWS AND PERSONALS

The Ninety-first Annual Session of the American Medical Association in New York, June 10–14, 1940, was attended by many Washington physicians. Those who participated in the scientific program were: Dr. Francis R. Hagner, who presented a paper entitled, "A Further Report on the Operative Treatment of Obstructive Lesions in the Testes as a Cause of Sterility in the Male," before the Section on Urology, June 14; Dr. G. Victor Simpson, who with Dr. Frederick H. Verhoeff of Boston discussed "Tubercle within Central Retinal Vein. Hemorrhagic Glaucoma; Periphlebitis Retinalis in Other Eye," before the Section on Ophthalmology, June 12; and Drs. Ethel C. Dunham and Jessie M. Bierman, who addressed a joint meeting of the Section on Obstetrics and Gynecology and the Section on Pediatrics, June 14 on "The Care of the Premature Infant."

Society members also took part in the discussions which followed presentation of papers. Among these were Drs. Frank J. Eichenlaub, Walter Freeman, Frank M. Hand, Joseph Kreiselman, James W. Watts and Wallace M. Yater.

The Medical Society was well represented in the Scientific Exhibit as the following list of exhibits discloses: Symposium on Heart Disease—"Venous Pressure Studies in Cardiovascular and Peripheral Vascular Diseases," Drs. J. Ross Veal and Hugh H. Hussey; Section on Surgery, General and Abdominal—"Evaluation of Stored Blood and Blood Serum," Drs. Charles S. White, J. Lloyd Collins and Jacob Weinstein; Section on Pathology and Physiology—"Cancer of the Breast; Radiant Energy and Lesions of the Skin," Dr. Eugene R. Whitmore.

Dr. Wallace M. Yater was elected Vice Chairman of the Section on Pharmacology and Therapeutics on June 14.

According to the registration lists in the *Daily Bulletin* published during the meeting, the following members of the Society attended:

Drs. Harry F. Anderson, John N. Andrews, Garnet W. Ault, John M. Baber, George L. Ball, G. J. P. Barger, E. Osmun Barr, E. Herbert Bauersfeld, Harry S. Bernton, Morris I. Bierman, Abe Blajwas, Francis I. Bloise, Joseph B. Bogan, Grafton T. Brown, Leo T. Brown, Warren B. Burch, Edward A. Cafritz, Tomas Cajigas, Read N. Calvert, John L. Cardwell, Charles T. Carroll, John R. Cavanagh, Morris Chase, Elizabeth Chickering, Austin B. Chinn, Roger M. Choisser, H. L. Claud, Edith S. Coale, J. Lloyd Collins, A. J. Connolly, Thomas K. Conrad, Edgar P. Copeland, Karl C. Corley, Frank D. Costenbader, George W. Creswell, Allen S. Cross, Cyrus W. Culver, Hugh S. Cumming, Edward J. Cummings, V. J. Dardinski, David Davis, William T. Davis, Aaron Deitz, William DeKleine, Joseph Dessoff, Harry H. Donnally, Harry S. Douglas, Harry F. Dowling, W. LeRoy Dunn, Roy F. Dunmire, F. J. Eichenlaub, Joseph F. Elward, Russell J. Fields, Daniel L. Finucane, Stuart O. Foster, Walter Freeman, Leslie H. French, Edward T. Gary, Louis S. Greene, Fred A. J. Geier, Joseph L. Gilbert, William T. Gill, Jr., Benjamin Golden, Carl Goldenberg, Leon S. Gordon, Riley H. Guthrie, Henry B. Gwynn, Charles C. Hageage, Francis R. Hagner, Frank M. Hand, B. L. Hardin, Jr., James Hawfield, Stafford W. Hawken, Ralph J. Haws, M. Lynwood Heiges, William P. Herbst, Jr., Herman Hertzberg, Edmund Horgan, Julian M. Howe, Edward Lee Howes, Vincent B. Hungerford, Oscar B. Hunter, Hugh H. Hussey, M. W. Ireland, Russel J. Jansen, Louise Tayler-Jones, H. Gladys Kain, Naomi M. Kanof, Sollie Katzman, Harry H. Kerr, Hayden Kirby-Smith, Elizabeth Kittredge, Maurice J. Kossow, Jacob Kotz, Joseph Kreiselman, Sander E. Lachman, Henry A. Latane, Oscar Lavine, James P. Leake, Zigmond M. Lebensohn, Thomas S. Lee, Harrison H. Leffler, George M. Leiby, Isadore Levin, Philip Litvin, John R. Lloyd, James W. Love, Henry C. Macatee, Leslie K. MacClatchie, Edward B. Macon, Benjamin Manchester, Raphael N. Manganaro, Albert E. Marland, Wilbur W. Martin, Richard V. Mattingly, Lee McCarthy, Francis X. McGovern, R. Sterling McGrath, Michael J. McInerney, Preston A. McLendon, Richard J. McNulty, Beveridge Miller, Claude W. Mitchell, Claude Moore, William A. Morgan, Howard T. Morse, Steuart B. Muncaster, Benjamin Newhouse, Margaret M. Nicholson, George K. Nutting, Paul J. O'Donnell, Ella Oppenheimer, William J. B. Orr, Joseph W. Peabody, Thomas M. Peery, Ivy A. Pelzman, William R. Perkins, Maurice Protas, Grace G. Purse, Edgar E. Quayle, Herbert P. Ramsey, George W. Reeves, William P. Reeves, E. Clarence Rice, Arch L. Riddick, Murry M. Robinson, Benjamin Rones, Ernest F. Sappington, Henry R. Schreiber, Maurice A. Selinger, Roy L. Sexton, William A. Shannon, Ernest Sheppard, Luther H. Snyder, Alma Jane Speer, William Mercer Sprigg, Erwin Steinman, Samuel J. Sugar, Albert J. Sullivan, Alexander Tish, Thomas C. Thompson, George Tolstoi, Frank H. Towner, J. Russell Verbrycke, Jr., Joseph S. Wall, James W. Watts, R. Lomax Wells, Charles S. White, Eugene R. Whitmore, Oscar Wilkinson, Frank L. Williman, Paul R. Wilner, William C. Woodward, Wallace M. Yater, Harry Zehner and Samuel Zola.

The Medical Corps of the United States Navy will hold its next examination for doctors of medicine desiring to enter the service on August 19, 1940 at the following Naval Medical Department activities:

U. S. Naval Hospital, Chelsea, Mass.
U. S. Naval Hospital, Brooklyn, N. Y.

Norfolk Naval Hospital, Portsmouth, Va.
U. S. Naval Hospital, Pensacola, Fla.
U. S. Naval Hospital, San Diego, Cal.
Naval Medical Center, Washington, D. C.
U. S. Naval Hospital, Newport, R. I.
U. S. Naval Hospital, Philadelphia, Pa.
U. S. Naval Hospital, Charleston, S. C.
U. S. Naval Hospital, Great Lakes, Ill.
U. S. Naval Hospital, Mare Island, Cal.
U. S. Naval Hospital, Puget Sound, Bremerton, Wash.

Graduates of Class "A" medical schools who have had an internship in a civilian hospital and who are physically and professionally qualified may be commissioned in the permanent Medical Corps of the Navy as Assistant Surgeons with the rank of lieutenant (junior grade). Applicants must be less than 32 years of age at the time they receive their commissions, citizens of the United States, physically qualified for appointment as officers in the Medical Corps and must demonstrate their professional qualifications by competitive written, oral and practical examinations. The professional examination will embrace the subjects of: (1) General Medicine, (2) General Surgery, (3) Obstetrics and Gynecology, and (4) Preventive Medicine and Medical Jurisprudence.

The pay and allowances for Assistant Surgeons with the rank of lieutenant (junior grade) in the Medical Corps of the Navy is $2,699 per year if the officer has no dependents, and $3,158 per year if he has dependents.

Additional information regarding physical requirements, etc., may be obtained by addressing a letter to the Bureau of Medicine and Surgery, Navy Department, Washington, D. C. Applications must be completed and received in the Bureau of Medicine and Surgery prior to August 1, 1940 in order that authorization may reach the applicant in sufficient time for him to appear for examination on August 19, 1940.

The Speakers' Bureau has responded frequently in recent weeks to requests from organizations for speakers. Since May 15 talks have been given before the following groups:

May 20, 1940 Woodlawn Home Demonstration Club
"Backache in Women," Dr. Herman Hertzberg
June 7, 1940 Washington Round Table
"Cancer—Its Prevention and Control," Dr. Francis D. Threadgill
June 10, 1940 Newcomers Club
"Fate of Food," Dr. Leslie H. French
June 24, 1940 Home Hygiene Class, Columbia Heights Christian Church
"Cancer—Its Prevention and Control," Dr. Robert J. Coffey.

In addition to the above, physicians listed with the Bureau addressed employees of the Rural Electrification Project at a Health Institute sponsored by the District of Columbia Work Projects Administration. Subjects of the talks were as follows:

May 20, 1940	"Cancer—Its Prevention and Control," Dr. Robert J. Coffey
June 3, 1940	"Child Welfare," Dr. Margaret M. Nicholson
June 3, 1940	"Maternal Welfare," Dr. Bernard Notes
June 7, 1940	"The Care of the Eyes," Dr. Sterling Bockoven
June 19, 1940	"Normal Living," Dr. James A. Gannon

A number of letters have been received at the Society's office from group leaders expressing their appreciation.

The Committee on Cancer Control has called the attention of local artists to a nation-wide poster competition sponsored by the American Society for the Control of Cancer. The poster must depict a "dramatic enlistment for a war to save lives, a pictorial appeal to men and women to unite for their own protection against this unconquered disease." Prizes are as follows: first $1000, second $500, third $250, fourth $50, fifth $25, and $10 each for the sixth to tenth inclusive. Posters will be received from October 1 to 12, 1940 by the National Alliance of Art and Industry, Inc., 119 East 19th Street, New York City.

The George Washington University General Alumni Association held its annual meeting and reception the evening of June 1 in the Hall of Governors. Dr. Robert H. Harmon, for many years director of the George Washington University Glee Club, was elected president. Dr. Howard F. Kane was chosen vice president representing the Medical School.

Six alumni of George Washington University were named to receive the annual achievement awards offered by the Association. Among the six was Dr. William J. Mallory, Professor Emeritus of Medicine at George Washington University School of Medicine, who received the award for achievement in medicine.

The Georgetown University Medical Alumni Club gave a complimentary luncheon to 180 guests on June 7, during the extension course conducted by the Georgetown University School of Medicine.

The Superintendent and the Executive Medical Staff of Garfield Hospital tendered the resident medical staff a luncheon on June 20 at the hospital. Dr. Frank E. Gibson, who served his internship at Garfield Hospital in 1899, was present with his son, Dr. Frank E. Gibson, Jr., a member of the resident staff. Dr. Henry C. Macatee, Dr. Henry R. Schreiber and Colonel Samuel J. Morris, interns of 30 years ago, were present with their nephews, now interns. Members of the resident staff present were Drs. John A. Norcross, Saul Holtzman, Samuel H. Shea, Albert S. Bright, Garner B. Meads, Frank T. Cawley, Robert Williams, William E. Bageant, William K. Billingsley, Jr., Alfred A. J. Den, Frank E. Gibson, Jr., William B. Lyles, Jr., Lawrence A. Rapee, Guy R. Stoddard, John O. Schreiber, Ernest A. Gould, Harry Hais, Andrew Weliber, George Macatee, Jr., and Uthia V. Wilcox.

National Homeopathic Hospital has an opening for a resident physician. Any interested physician may communicate with the superintendent.

Saint Elizabeths Hospital and **Freedmen's Hospital** have been transferred from the jurisdiction of the United States Department of the Interior to the Federal Security Agency, effective June 30, in accordance with the President's reorganization order.

Saint Elizabeths Hospital has been under the direction of the Department of the Interior since its founding in 1855, a period of 85 years. It now becomes a part of the United States Public Health Service but will operate as a separate unit.

Dr. T. Edward Jones, Director-in-chief of Freedmen's Hospital, and other members of the hospital staff gathered in Secretary Ickes' office on June 11 to express their appreciation for the assistance rendered the hospital by the Department during the past 60 years.

Dr. Daniel F. Lynch was installed president of the District of Columbia Dental Society at the Society's annual meeting which was held in the United States Public Health Building on June 11. He succeeds Dr. Marion Falls. **Dr. Walter A. Rath** was elected to the Board of Dental Health.

The Jewish Community Center sent its first group of children, 160 in number, to summer camps on June 24. Among the physicians who gave physical examinations to these children were Drs. Edward A. Cafritz, Paul R. Wilner, Ellis April, Maxwell Hurston, Carl Silverman, Anna Tulman-Rand, Herbert H. Diamond and Arthur H. Lewis.

Dr. Winfred Overholser was awarded the honorary degree of Doctor of Science by Boston University in Boston on June 10. The citation prepared by the University in conferring this honor stated that the honorary degree was being awarded because Dr. Overholser, by reason of his abilities, "has become a foremost psychiatrist of the present age." Dr. Overholser received his degree in medicine from Boston University in 1916 and has been superintendent of St. Elizabeths Hospital since 1937.

Dr. William DeKleine received the Alumni Merit Award from Northwestern University in Chicago on June 14. The merit awards are presented to graduates whose life work has been a credit to the university and to the community.

Dr. Wallace M. Yater was elected Chairman of the Section for the Study of Peripheral Circulation at the meeting of the American Heart Association in New York, June 8.

Dr. James A. Lyon, a major in the U. S. Army Medical Corps, was elected Commander of the Washington Chapter, Military Order of the World War, at a luncheon June 13 at the Mayflower Hotel.

Dr. Arthur C. Christie was one of the speakers at the annual meeting of the Texas State Medical Association, which convened in Dallas, May 12–16. He addressed the general session on "Diagnosis and Treatment of Cancer of the Breast." He discussed "Diagnosis and Treatment of Bronchiectasis" before the combined sections of the association and "Diagnosis and Treatment of Cancer of the Pharynx" before the Section on Radiology.

Dr. Christie also attended the annual meeting of the American College of Radiology in New York on June 12. He is a member of the Board of Chancellors and the Inter-Society Committee on Economics.

Dr. J. Winthrop Peabody, president of the District Tuberculosis Association, was elected first vice president of the American College of Chest Physicians and a member of the Committee on Military Affairs at the annual convention in New York, June 8–10. Dr. Peabody was also reëlected a member of the Board of Directors of the National Tuberculosis Association at its annual meeting in Cleveland, June 3.

Dr. W. Sinclair Bowen spoke at the 18th anniversary of the District Anti-Cigarette Alliance held at the First Congregational Church on June 27.

Dr. William J. Cusack has been elected to the Board of Governors of the Georgetown University Alumni Association, according to an announcement made June 15.

Dr. William B. Marbury participated in the program of the 43rd annual meeting of the Baltimore and Ohio Association of Railway Surgeons which was held at the Hotel Commodore in New York, June 6–8.

Physicians are warned to be on the lookout for a man who sells a bookkeeping system. He has called upon several physicians and has obtained down payments. Nothing further has been heard from this man nor have the physicians received the bookkeeping systems promised.

BOOKS RECEIVED FOR REVIEW

Acknowledgment is made of the following books which have recently been received for review:

Modern Dermatology and Syphilology. S. William Becker, M.D., Associate Professor of Dermatology and Syphilology, and Maximillian E. Obermayer, M.D., Assistant Professor of Dermatology and Syphilology, Kuppenheimer Foundation, University of Chicago. Pp. 871. Price, cloth, $12.00. Philadelphia: Lippincott, 1940.

The ERA Key to the USP XI and NF VI, 5th ed. Revised by Lyman D. Fonda, Professor of Pharmacy, Brooklyn College of Pharmacy, Long Island University. Pp. 320. Price, $1.00. Newark, N. J.: Haynes and George, 1939.

Graduate Medical Education. Report of the Commission on Graduate Medical Education, 1940. Pp. 303. Chicago: University of Chicago Press.

Simplified Diabetic Manual. Abraham Rudy, M.D., Associate Physician and Chief of the Diabetic Clinic, Beth Israel Hospital, Boston; Instructor in Medicine, Tufts College Medical School; Consultant in Diabetes, Jewish Memorial Hospital, Roxbury, Mass., and Jewish Tuberculosis Sanatorium, Rutland, Mass. Pp. 216. Price, cloth, $2.00. New York: Barrows, 1940.

REPRINTS RECEIVED

The following reprints have recently been received for which due acknowledgment is made:

"Baptism of the Infant and the Fetus." J. R. Bowen. Dubuque, Ia.: M. J. Knippel Co., 1939.

"Psychoses with Myxedema." Ralph M. Crowley. American Journal of Psychiatry, March, 1940.

"Transillumination of the Breast." Max Cutler. New York: American Society for the Control of Cancer.

"Motion in the Vertebral Column." Joseph F. Elward. American Journal of Roentgenology and Radium Therapy, July, 1939.

"Experiences with the Total and Intracapsular Extirpation of Acoustic Neuromata." Gilbert Horrax and James L. Poppen, Annals of Surgery, October, 1939.

"Congenital Malformations of the Pulmonic and Aortic Valves." Donald W. Ingham. Annals of Internal Medicine, November, 1938.

"Coarctation of the Aorta." Donald W. Ingham. New York State Journal of Medicine, October, 1939.

"Paradoxical Embolism." Donald W. Ingham. American Journal of the Medical Sciences, August, 1938.

"Toxic Cirrhosis of the Liver Due to 'Hydrocin' (50 per Cent Cinchophen)." Donald W. Ingham. Journal of the American Medical Association, December 9, 1933.

"Endocardial Pockets." Donald W. Ingham and John C. Henthorne. Archives of Pathology, February, 1938.

"Congenital Transposition of the Great Arterial Trunks." Donald W. Ingham and Frederick A. Willius. American Heart Journal, April, 1938.

"Clinical Aspects of Chronic Disorders of the Small Intestine." Everett D. Kiefer. Journal of the American Medical Association, October 21, 1939.

"Intrathoracic Goiter." Frank H. Lahey. Journal of the American Medical Association, September 16, 1939.

"Technique of Subtotal Gastrectomy for Ulcer." Frank H. Lahey and Samuel F. Marshall. Surgery, Gynecology and Obstetrics, October, 1939.

"Regional Differences in Hospital Facilities for Tuberculosis, from the Standpoints of Accommodations, Sources of Financial Support, and Operating Costs." Joseph W. Mountin, Elliott H. Pennell and Kay Pearson. Transactions of the Thirty-fifth Annual Meeting of the National Tuberculosis Association, 1939.

"Prevailing Ratios of Personnel to Patients in Hospitals Offering General Care." Elliott H. Pennell, Joseph W. Mountin and Kay Pearson. Hospitals, November, 1938.

"Summary Figures on Income, Expenditures, and Personnel of Hospitals." Elliott H. Pennell, Joseph W. Mountin and Emily Hankla. Hospitals, April, 1938.

"Clinical Syndrome Manifested by Various Types of Compression of the Spinal Cord; Differential Diagnosis of Spinal Cord Tumors." Clinic of Dr. LeRoy H. Sloan, Illinois Central and St. Luke's Hospitals. Surgical Clinics of North America, April, 1937.

"The Early Recognition of Acute Appendicitis." Clinic of Dr. LeRoy H. Sloan, Illinois Central Hospital. Medical Clinics of North America, March, 1935.

"Polycythemia: Consideration of the Types, Symptoms and Findings in Polycythemia Rubra (Vera); Presentation of Patients." Clinic of Dr. LeRoy H. Sloan, Cook County Hospital.

"Diabetes Mortality in Pennsylvania." Frank P. Strome and Belford C. Blaine. Pennsylvania Medical Journal, January, 1940.

"Polyps of the Colon and Rectum and Their Relation to Malignancy." Neil W. Swinton and Shields Warren. Journal of the American Medical Association, November 25, 1939.

"The Effect of Reducing Diets on the Eye (A Public Health Problem)." William Thau. Canadian Medical Association Journal, 1940, **42**, 550.

"Passive Muscular Exercise by a New Method." Max Waltuch. New York Physician, April, 1940.

"Prevention of Ignition of Anesthetic Gases by Static Spark." Philip D. Woodbridge, J. Warren Horton and Karl Connell. Journal of the American Medical Association, August 26, 1939.

CALENDAR OF HOSPITAL MEETINGS

Casualty Hospital	General Staff	1st Thursday	1:15 p.m.	Each month
Children's Hospital	Attending Staff	1st Monday	2:00 p.m.	Except July, August and September
	Clinical Conference	2nd Tuesday	12:30 p.m.	Except July, August and September
	Sunday Morning Conference		11:00 a.m.	
Columbia Hospital	General Staff	4th Tuesday	8:00 p.m.	Except July and August
	Medical Board	2nd Friday	11:00 a.m.	Except July and August
Emergency Hospital	General Staff	Last Thursday	8:00 p.m.	
Episcopal Eye, Ear and Throat Hospital	Medical Board	1st Friday	8:00 p.m.	
Gallinger Hospital	General Staff	2nd Thursday	11:30 a.m.	Except July and August
Garfield Hospital	Medical Staff	4th Wednesday	12:00 noon	October, December, February, April and June only
	Advisory Committee of Medical Staff	1st Monday	12:00 noon	
	Medical Conference	3rd Wednesday	12:15 p.m.	
Georgetown University Hospital	Executive Staff	2nd Monday	12:30 p.m.	
	General Staff	2nd Monday	8:00 p.m.	
George Washington University Hospital	General Staff	2nd Monday	12:15 p.m.	
National Homeopathic Hospital	Executive Staff	3rd Tuesday	12:00 noon	
	Courtesy Staff	3rd Tuesday	1:00 p.m.	
Sibley Hospital	Medical Council	2nd Tuesday	8:00 p.m.	
	General Staff	2nd Tuesday	8:30 p.m.	

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SOME REMARKS ON THE DIAGNOSIS AND TREATMENT OF PULMONARY TUBERCULOSIS*

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DIAGNOSIS

The treatment of pulmonary tuberculosis begins with the diagnosis of the disease. During April we took part in a campaign, under the auspices of the National Tuberculosis Association, to discover early and hidden tuberculosis. The recent survey by the American Medical Association of patients with the reinfection type of pulmonary tuberculosis reveals that 12.9 per cent had minimal disease, 31.1 per cent moderately advanced and 55 per cent far advanced disease. In your Glenn Dale Sanatorium in 1938, 26.2 per cent of the admissions had moderately advanced and 63.5 per cent far advanced disease. In the District of Columbia in 1938 you discharged from your Sanatorium and health department services 1,941 patients with a mortality of 19 per cent, a figure very close to the rate for the nation. With earlier diagnosis this figure could be reduced. The diagnosis of the disease is not difficult if one has it in mind. A history of loss of weight, easy fatigability, neurasthenia and prolonged indigestion should attract attention to the possibility of a systemic disease causing local symptoms. Of course a history of cough, expectoration, blood-spitting, pleurisy, repeated colds, etc., always indicates a thorough examination of the lungs. Today we realize that routine X-rays of school children will uncover a low percentage of cases of active tuberculosis, and the prevalence of the disease in the wage-earning decades is the reason for the present trend to search in industrial, office and mercantile groups by routine roentgenograms for the early cases of latent disease. But routine tuberculin-testing of children affords us an opportunity to search carefully among the contacts of reacting children for the open cases which are spreading bacilli.

It is still important to examine any expectoration for tubercle bacilli. For one thing the examination can be done without cost to the patient, although unfortunately many public laboratories do not make a practice of performing concentration, cultural and guinea-pig tests which are frequently necessary before the bacillus can be found. When a patient claims to have no sputum it is a good idea to insist on his collecting any mucus or phlegm he can raise after a meal, or after smoking. If abnormal shadows are found in the X-ray film and no phlegm can be obtained, tubercle bacilli can be found sometimes in the washings from the stomach in a fasting state, or in the feces.

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* Read before the Society, April 17, 1940.

The most important means of discovering the disease is the X-ray film. The quality of the film must be good, and frequently stereoscopic pairs are necessary. It is very probable that many communities doing surveys of special groups will soon have available apparatus for taking small photographic films of fluoroscopic images. This will greatly reduce the cost of such surveys.

It is very important for the family physician to study the films of his patient with the roentgenologist. When the film reveals an extensive lesion, a difficulty may arise in practice as to whether the lesion is active or not. This difficulty is much more likely to arise when the film reveals a small isolated shadow. Here clinical judgment has more weight than the opinion of the roentgenologist alone. Not all X-ray specialists who are expert at interpreting disorders of the gastrointestinal tract, for instance, are capable of determining the degree of inflammation or the age and importance of a slight lesion in the lung. For this problem the family physician should call in consultation a specialist who is well acquainted with tuberculosis. The specialist may not be as well satisfied as the roentgenologist with the quality of the technic; he may ask for stereoscopic films, or he may ask the physician to search repeatedly for tubercle bacilli. The tuberculin test, if it is negative, may give some help. An abnormal sedimentation rate and leukocytic index may throw light on the problem; or a period of observation may be necessary, recording the temperature and pulse rates while the patient is in bed. Sometimes only serial roentgenograms at weekly or monthly intervals will settle the question. A relatively extensive lesion well fibrosed and unchanging over a period of months may require no active treatment, but in our advice to these people we must impress on them how very relapsing the disease is and therefore how necessary it is to have a regular check-up. On the other hand, a very minimal lesion may be very fresh and active and require prolonged bed rest.

I have not mentioned physical signs in diagnosis because so many busy practitioners have so little confidence in their ability to elicit and to interpret them. Most cases of tuberculosis are still being discovered in an advanced stage and they usually present abnormal chest findings. Râles in the upper third of the lung heard on inspiration after a cough following expiration nearly always are caused by a tuberculous lesion.

Treatment

The diagnosis of a case of tuberculosis presents a further problem to the family physician. He should examine all contacts, especially in the family. The adult members should have a chest roentgenogram and the children a tuberculin test, and, if that is positive, an X-ray film. Furthermore, the tuberculin test, if negative, should be repeated yearly. The most dangerous period is that of puberty, especially in girls.

The important elements of treatment are concerned with the following facts:

1. The disease is a systemic, general infection which has toxic effects on remote organs and functions, especially the mind.
2. It is contagious.
3. Under any form of treatment it heals very slowly.
4. The disease is in a moving organ which is under constant tension, and relaxation of the lung by various measures in selected cases favors healing.
5. It can progress in a most insidious manner and therefore requires very close observation and practiced care.
6. It is a very relapsing disease. A comparison of the results at discharge from sanatoria and the mortality rates five years

later reveals very clearly that the family physician has not fully realized how important is the after-care of these patients.

After the diagnosis has been made the first question the physician has to decide is where to place his patient for treatment. In this chronic disease the treatment of the personality of the patient is often more important than are specialized measures to control the lesion. We have to deal with undisciplined persons, with people cowed by fear, with ambitious people who have always disregarded rules of health in their quest for advancement and who are tormented by inactivity, with wives driven by jealousy when separated from their husbands, with querulous, selfish, careless persons who are unwilling to admit they may be a menace to their families, with others who think of tuberculosis as bearing a social and even a moral stigma and who therefore wish to conceal it, and, of course, we have the brave, normally reacting patient who accepts the diagnosis resignedly and who wants to coöperate perfectly with the physician. These patients all need isolation from their family at least for several months and frequently during the whole active phase, no matter how mild the disease. An environment of healthy active people is too stimulating. Visiting friends believe that the patient must be bored by his life of inactivity, and they urge him to go for rides or for a visit. His business associates, seeing him looking so well, think he needs something to occupy his mind and they bring some of their problems to him. In the early stages of treatment these patients would prefer not to be reminded of pleasant fields afar which they have given up on advice of the physician.

And they need education about the disease. This is best accomplished at the sanatorium. If the patient takes treatment at home the most important element is the attendance of a nurse experienced in the treatment of this disease. He needs someone to stand between him and his environment. Very few patients can afford that. Pinner analyzed 3,131 registered cases in the Bronx Borough and found that about one third were under the care of private physicians, another third in hospitals and sanatoria and the remainder attending clinics. This had to be so because there are available beds for only one fourth of the approximately 20,000 registered cases in New York City. Because few patients taking treatment at home can afford the first essential of the first few months of treatment, a well trained nurse, and since so many patients are under treatment in their homes, it is encumbent on our medical societies to make available to the general practitioner postgraduate courses in the treatment of tuberculosis. If the family physician is to treat these patients, besides acquiring the art of the psychotherapeutic approach to the problem he should be well acquainted with the relatively strict distinctions in the choice of the various collapse measures employed so much today. In practically all sanatoria these decisions, when to interfere and which method to employ, are the result not of the chief's decision but of the combined experience of the whole staff. And these decisions are frequently difficult to make. It is equally important for the general practitioner to realize that there are other times when he needs the advice of a specialist; for instance, when to allow the patient out of bed and when to return him to work are very difficult decisions, even for one who is treating the disease daily.

When the present campaign for early diagnosis has gained more momentum, our profession will be faced with the problem of treating fairly large numbers of adults who are not at all sick but in whom the roentgenogram reveals active lesions. Many of them will rebel against the régime of self-discipline which must be prescribed for them.

Rest is the keystone in the treatment of pulmonary tuberculosis, no matter how minimal its extent. Collapse therapy has not displaced it. The best results are obtained by the so-called "natural cure," but unfortunately in so many patients the disease has progressed to such an advanced stage before it is discovered that relaxation of the lung is indicated in a very large percentage. In evaluating the functional results obtained by non-collapse and by collapse therapy we must keep in mind that collapse measures are accompanied by many complications. A paralyzed diaphragm may fail to resume its motion even though a temporary paralysis was originally intended. Pleural effusion occurs in about 75 per cent of pneumothorax patients, and it becomes purulent in 10 to 20 per cent of them. The lung sometimes will not reëxpand. Bronchopleural fistula is not a rare complication. Prolonged collapse of the lung without complications causes some interstitial fibrosis with consequent decreased pulmonary function. Occasionally fatal accidents, such as air embolism and postoperative surgical collapse, occur.

The prime contraindication to the employment of collapse therapy is the estimated ability of the patient to recover without it. This means that a preliminary period of bed rest should first be tried. Even if it is found two or six months later that pneumothorax is advisable for closure of a cavity which has decreased in size but has not closed, no time has been lost if, while under careful observation, inflammation has decreased and the patient's general condition has improved. The complications of artificial pneumothorax are less numerous if the treatment is started when the disease is less inflamed and when the caseous wall of the cavity has sloughed out somewhat. Several analyses have shown that patients undergoing collapse therapy spend more time in sanatoria than do non-collapse patients. It is true, however, that a patient with the lung under collapse is often able to return to work earlier and more safely than does one who is cured by the rest-hygienic régime. In spite of the fact that collapse treatment is indicated in about 60 per cent of hospital and sanatoria patients because of the late diagnosis and advanced stage of the disease, we should not forget that ordinary rest and fresh air treatment is the best form of therapy in carefully selected patients. Among them are those with exudative disease, with a cavity under 4 cm. in diameter who show a regression of toxic symptoms and beginning absorption of abnormal shadows soon after being placed on bed rest with perhaps bathroom privilege once a day. The current popularity of collapse therapy is partially based on a desire to put the patient back to work very early, an economic urge which is not always to the patient's best interest. When the patient's financial resources are good it is not always to his advantage to apply to him methods which have been forced upon us by the necessity of treating many patients with insufficient beds at our disposal.

Pneumolysis, or the severing of adhesions which are preventing an effective collapse of the lung, has greatly improved the results obtained by pneumothorax. Oleothorax is a helpful adjuvant in pneumothorax cases in some forms of tuberculous empyema and when the lung is tending to expand prematurely before the lesion is considered to be healed.

Paralysis of one leaf of the diaphragm is a useful measure combined with bed rest when the cavity is small, the disease not very extensive and the systemic effects mild. Artificial pneumothorax is indicated when the disease progresses; when hemoptysis occurs; to replace a pleural effusion; and at the beginning of treatment when the disease is predominately unilateral, extensive and very toxic, especially when a good-sized cavity is present. The management of a pneumothorax patient would be a lecture in itself.

Present-day sanatorial architectural trends do not take into consideration the value of a free play of air around the patient with pulmonary tuberculosis. Many patients, especially those with advanced, chronic disease, survive longer when they live an out-of-door life. Many a patient on being transferred from a room to a sleeping porch notices a definite improvement in appetite, sleep and general nervous tone. The same remark applies to the value of a stimulating climate. A patient who is undergoing treatment in his home climate and who is not improving should be given the added stimulus of a change of climate. In some patients it makes the difference of living or dying; in many chronic cases it affords additional comfort and ease of living. In health resorts these chronic invalids are more likely to lead a leisurely, properly regulated life.

The supervision of the emotional reactions of patients with pulmonary tuberculosis is extremely important. The doctor must assume this responsibility if he is going to treat these patients. It is very time-consuming and much more exhausting than the average medical work. The doctor is often discouraged when he thinks how little he can actively do to alter the patient's constitutional reaction to the disease. By the confidence and optimism which he can transmit to the patient he can relieve nervous and tense mental habits, he can alleviate anxiety and fits of depression which have such a deleterious effect on the natural processes of immunity. While psychotherapy has its largest field in patients with advanced, chronic disease, in some of the milder cases fear complexes often are more prominent than local objective symptoms. Many of the short articles on tuberculosis tend to give the impression that to treat the disease one needs only to be experienced in introducing air into the chest or in removing ribs. On the contrary, many introspective tuberculous patients will tax the ingenuity of the practitioner in trying to keep one step ahead of them by dissipating fears, by prescribing some harmless medicine for a minor complaint which to the patient has assumed the proportions of an impending danger.

Gold therapy is occasionally a valuable adjuvant of hygienic treatment in some patients with disease too extensive or too toxic to receive collapse therapy. It is a dangerous drug, but with careful watching for its known reactions it will sometimes tide over a patient whose condition appears to be hopeless.

Some of the common complications of pulmonary tuberculosis, when they are mild, often go unrecognized. As soon as the disease has been found in the lung the larynx should be examined. Voice rest and training the patient how not to cough may prevent a congested larynx from becoming infiltrated with tubercle. A definite tuberculous laryngitis often precipitates the decision to give pneumothorax. Electrocoagulation of the laryngeal lesion gives excellent results and the patient should not be deprived of this benefit from the failure of the physician to examine the larynx periodically. Incidentally, not all specialists in diseases of the throat are well acquainted with tuberculosis of the larynx. Frequently the better choice of a consultant when slight hoarseness occurs would be a tuberculosis specialist. Another common complication is intestinal tuberculosis. All patients with pulmonary cavity and tubercle bacilli in the sputum should have an X-ray examination of the intestinal tract. A lesion in the bowel may be present without causing symptoms. It usually responds well to a high vitamin diet and ultraviolet therapy.

Finally we must remember that tuberculosis is long in healing. Collapse therapy has saved many lives, but too much reliance must not be placed upon it as a short cut to save time. The disease in a collapsed lung heals by natural means and nature works slowly. It is unfair to patients to promise a cure in six or twelve months which we know will require several years. The adroit doctor will avoid the patient's direct questions about the duration of treatment. If we have made no early bad guesses, we are not held to them later. Overconservatism is the best guide in treatment, as far as time is concerned. In the patient who does well, lack of symptoms are not necessarily reliable guideposts. If the lesion is soft and exudative, bed rest is kept up as long as the absorptive process continues. Serial roentgenograms here are the guide. Later one likes to see the sedimentation rate, the lymphocytic-polymorphonuclear index, and the percentage of immature leukocytes fall to normal. Then when we think that the patient can leave his bed we give him a month or more longer, because none of our guides are infallible. It is easy enough to obtain the patient's coöperation while he is in bed; it is when he is on gradually increasing exercise that every small detail of his daily routine needs the closest supervision.

Our great defect is in the postsanatorial treatment. We must develop more rehabilitation centers. Some business concerns do not want these people on their payrolls. Many patients can never attain a complete recovery. Nevertheless, they may attain such a degree of health that even with a fibrous-walled cavity, and cough and expectoration containing a few tubercle bacilli, they are able to do a good life's work. If after leaving the hospital or sanatorium they could lead for a year or two a sheltered life, free from too active competition, yet partially or wholly self-supporting and retaining their self respect, many more than at present could be restored safely to their family and business circles.

Conclusions

The diagnosis of pulmonary tuberculosis is not difficult if one has it in mind when consulted by patients who are slightly "run down," if one learns what constitutes a poor X-ray film, if one seeks competent advice on the interpretation of films, and if one asks the laboratory to search for tubercle bacilli when sending a specimen of sputum for pneumococcal examination in cases of atypical or suspected pneumonia or prolonged colds.

I have tried to show in their true light the difficulties of treating a patient with tuberculosis over a period of several years. Nearly two thirds of our patients have advanced disease and need no less than two or three years of intensive treatment. Economic conditions and an insufficient number of beds in hospitals and sanatoria have led to a large number of patients taking treatment at home. The family physician with cases of pulmonary tuberculosis under his charge should consult frequently with the specialist because of the vagaries of the disease. His responsibility during the postsanatorial period is very great because of the insidiously relapsing character of the disease.

Temporary blood pressure elevations may foretell hypertensive disease. Temporary elevations in blood pressure due to emotional stress, although commonly believed insignificant, probably indicate that the patient will be susceptible to hypertensive disease in later life, Edgar A. Hines, Jr., M.D., Rochester, Minn., maintains in *The Journal of the American Medical Association* for July 27, 1940.

Dr. Hines studied the records of 1,522 patients, 732 of whom were reëxamined ten years and 790 twenty years after their original blood pressure reading. He found that in 13.2 per cent of the first group and 23.5 per cent of the second group high blood pressure had developed. Among patients whose original blood pressure was high, 59.7 per cent of the ten year group and 82.5 per cent of the twenty year group had high blood pressure at the time of the follow-up study.

The author points out that in an initial test for blood pressure or a test given in strange surroundings the readings may be high when subsequent readings for the same patient are within normal limits. "Some physicians," he says, "seem to think that, if one or several readings of blood pressure within the accepted normal range are obtained, the possibility of a patient's having high blood pressure disease is excluded. My experience has led me to believe that any transient elevation of the blood pressure above a certain level should be regarded as evidence of a hyperreactive (overly sensitive) regulating mechanism for blood pressure and that in many instances this hyperreactivity is a precursor of sustained hypertension.

"Patients whose blood pressures are not elevated, as a result of nervous stress, to more than 140 on the heart's contraction and 85 on its dilatation are not likely to have high blood pressure later. If the blood pressure under such circumstances is less than 120/70 the patient is almost certain not to have hypertension (high blood pressure) subsequently."

CHRONIC OTORRHEA*

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Chronic otorrhea is one of the most important diseases of the organ of hearing in view of its frequency, chronicity, difficulty in management, and the serious complications which may arise in its course. This disease constitutes a considerable part of the medical repertoire, since no one in active practice can avoid meeting it quite frequently.

In this presentation I am obliged to omit a consideration of the causative factors, diagnostic procedures, and therapeutic measures pertaining to this disease, since the time allotted is insufficient for such detailed discussion.

It is the general clinical opinion that middle-ear disease is more frequent in children than it is in adults. In fact, in the majority of cases of chronic otorrhea in adults, the history of running ear dates back to early childhood.

It is more common among the poor than among those living under good environmental conditions. Statistical findings indicate that chronic otorrhea is about four times as common under poor social conditions as under good social conditions.

The incidence of chronic otorrhea in hospital or institutional practice is much greater than it is in private practice.

Statistics relative to the incidence of chronic otorrhea are not abundant, but those available are sufficient to demonstrate how widespread this disease is.

Cheatle examined 1,000 school children and found 88 cases of chronic otorrhea.

Crooks[1] reported that in 1934 the incidence of this disease in the London elementary schools was 0.9 per cent. Among the school children of Essex during the same year it was 4.8 per cent.

The incidence of this disease in adults can be determined from the statistics compiled by the Army and Navy in the draft of the last World War. During the period of 1917, 1918 and 1919, 2,753,922 men were examined for service. There were 23,608 cases of chronic otorrhea and 20,000 additional men with defective hearing. All but a few hundred of these were rejected.

The report of the Surgeon General of the United States Army to the Secretary of War[2] in 1919 gave the following figures. Among those examined for the officers' group the incidence of chronic otorrhea was 5.2 per 1000; among the enlisted men it was 12.23 per thousand. In a total of 633,989 men examined for service in the Navy there were 7,005 cases of chronic otorrhea and 4,405 cases of other ear troubles. During the period of the World War the United States Navy discharged from service 1,431 men because of chronic otorrhea.[3] The Marine Corps examined 213,679 men during the period of 1917 to 1919. In this group there were 2,339 cases of chronic otorrhea and 1,620 cases of other ear troubles. During this period 107 men were discharged from service because of chronic otorrhea.

The above statistics are insufficient as far as a statistical study of the incidence of chronic otorrhea is concerned, since they do not include a study of the prevalence of this disease among women and among men outside of the draft age. However, they are sufficient to demonstrate the frequency of this disease.

Chronic otorrhea is, to a large extent, a preventable disease, and not, as some would like to make us believe, a self-limited one. Much can be achieved if proper and painstaking treatment is instituted and carried out during the acute stage. And even if the chronic stage has already set in much can be done to shorten its course. Unfortunately, this condition is usually mild and innocent in appearance and is consequently not given the proper consideration. Were it, however, a painful condition or one resulting in acute illness, then neither parent, patient, nor doctor would procrastinate, and chronic otorrhea would be less frequent than it unfortunately is. It is amazing how long patients will wait before consulting a physician for a discharging ear. Some will even overlook a gradual but increasing loss of hearing for a long time and consult a physician only because they cannot tolerate the odor of the discharge any longer. In going through our private files we find patients who have waited as long as twenty years before seeking medical aid for the running ear.

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* Read before the Jacobi Medical Society, February 19, 1940.

The responsibility for such neglect, I regret to say, very often lies upon our shoulders, rather than upon those of the patient. Although aware of the possibility of dangerous consequences we often fail to inform our patient of the seriousness of this condition. It is only too easy to prescribe some ear drops, usually more harmful than helpful, and let it go at that. We occasionally hear patients tell us that they have been advised by the family physician to forget the running ear, since nothing can be done about it, and that as long as it keeps on discharging nothing of a serious nature can develop.

Chronic otorrhea, unfortunately, is a serious disease, and as long as the discharge continues it will do damage, as will be shown later on in the discussion of the possible complications of this disease.

Very recently a less fortunate patient of mine, who has been having a discharging ear for 15 years and a chronic progressive facial paralysis in the last 7 years, told me that his family physician, in the face of all this, advised him that nothing could be done about it. At autopsy we found a chronic brain abscess.

This brings us to the consideration of the complications encountered in chronic otorrhea. However, to thoroughly understand the pathogenesis of these complications one must be acquainted with the pathology of chronic otorrhea and the routes of invasion into the deeper structures of the head.

In the early stages of chronic otorrhea the infection is confined to the soft structures of the middle ear. The mucous membrane of the tympanum is considerably swollen, being infiltrated with round cells clear down to the periosteum. The epithelium, normally ciliated columnar, gradually loses its cilia and is transformed into a low cuboidal type. In some areas the mucosa may even become denuded entirely, while in others it may become markedly hyperplastic and interlaced with small cysts. As the infection progresses the bone becomes involved. There is a dimpling and hollowing out of the bone, indicating active osteomyelitic involvement. In some a certain amount of caries of the ossicles may also take place. The suppurative process may involve the attic and because of the complexity of structure and difficulty of drainage pus may remain in these compartments entirely undisturbed. In an attic infection another treacherous formation may take place. In the attempt at epidermization, the skin growing into the cavity through the marginal perforation is met with many obstacles. It becomes soaked with the pus and continuously desquamates, resulting in the formation of a pultaceous material full of polymicrobic organisms and desquamated or dead epithelium. This cholesteatomatous mass gradually increases in size and eventually fills the cavity. Erosion of the bone may occur wherever the latter projects into this cavity. This process may extend in all directions, involving the horizontal semicircular canal and consequently the labyrinth, invading the lateral sinus and causing thrombophlebitis, or uncapping the tegmen tympani and invading the meninges and brain, all of which lead to fatal consequences.

Pus in the middle ear may thus be compared to a fire in the woods. If left unchecked it is at liberty to spread in all directions, attack the ossicles, close the eustachian tube, involve the mastoid and adjacent venous sinuses, or invade the labyrinth, meninges or brain. The middle ear stands at the crossroads of these important and delicate structures and the devastating pus may find its way into any of these parts with almost the same ease as it does into the external auditory canal. The complications of chronic otorrhea are not infrequent and unfortunately are often fatal.

If the pus is confined to the middle ear it tends to disturb, in an alarming number of cases, the function of hearing, and to lead to the crippling disability of deafness. Whether it be due to closure of the eustachian tube, presence of fluid in the tympanum, necrosis of the ossicles, or ankylosis of the stapes, the disability is of great importance. In the past decade or two this complication of chronic otorrhea has received serious consideration, and the literature has become saturated with articles on this very subject. When we find that 40 per cent of the entire adult population[4] is crippled with deafness and that in the majority of cases chronic otorrhea is the causative factor, we realize how important our problem is. A fact of further significance is that in more than 50 per cent of the deafened adults the disability took origin in the first decade of life.

In the adult, impairment of hearing is of considerable handicap and most often interferes with the victim's social adjustment. It tends to invoke abnormal complexes and occasionally creates a psychotic personality. I can cite many examples of such reactions, but being poorly trained in psychiatry and unable to catalogue these personalities in psychiatric nomenclature I will leave that angle with the psychiatrist.

In children this condition assumes even a more serious nature. The most striking effect of impairment of hearing is the interference with the development of speech. A child, as you know, learns to speak by imitating that which he hears, and with hearing interfered with the chances of learning to speak are reduced.

Deafness also has a far-reaching effect on the mental development of the child. With speech sounds and noises excluded from access to the brain in the natural manner, there is definite interference with the mental development of the child and mutism will follow. This train of events is not confined only to the pre-speech developing period, for it can come about even after the child has learned to speak, since the onset of deafness will cause the child to forget the speech he has already acquired.

Chronic otorrhea assumes a far more serious aspect when we consider the grave complications, those threatening the life of the patient, that may attend it, especially in an acute exacerbation of the chronic condition.

A discharging ear of long standing is often associated with chronic mastoiditis. This is a slow but progressive involvement, and often without any disturbing subjective symptoms. The discharge may be scanty and devoid of foul odor, and it may fail to make its appearance in the external auditory canal. Yet these ears are dangerous, since the infection, often latent, may involve some neighboring vital structure.

Intracranial complications, in the presence of chronic otorrhea, are relatively frequent, since the mucous membrane of the middle ear and mastoid in the presence of such pathology lacks the protective mechanism present in other mucous membranes, such as in the nose and in the paranasal sinuses.

Gardiner reported that in 8,000 consecutive deaths at the Royal Infirmary of Edinburgh he found that 160 or 2 per cent were due to complications of chronic otorrhea.

Rechter in 1938 reported a series of 136 cases of cholesteatomata of the middle ear, in which there were the following complications:

9 cases of subperiosteal abscess
11 cases of extradural abscess
25 cases of perisinuous abscess
27 cases of labyrinthitis
13 cases of lateral sinus thrombosis
4 cases of brain abscess
17 cases of meningitis

In this series all were operated upon with a loss of 14 cases.

Otitic meningitis is still the most dreaded complication, and until very recently its mortality rate still approximated 100 per cent.

At Johns Hopkins Hospital, up to the advent of surgical drainage and the use of sulfanilamide, all cases of meningitis complicating chronic otorrhea had a 100 per cent fatal termination.[5] Manhattan Eye and Ear Hospital had 101 cases of otitic meningitis in the period of 1926 to 1935, with a mortality rate of 98 per cent.[5] Gray collected 2,200 cases in the literature of 1901 to 1935 with a mortality rate of 97 per cent.[5] Neal collected 238 cases in the literature of 1910 to 1935, and found a mortality rate of 95 per cent.[5]

With the advent of bolder surgical measures and the use of sulfanilamide the mortality rate seems to have improved in otitic meningitis. Cunning[5] reported in December 1939, 15 consecutive cases of otitic meningitis with 11 cures and 4 deaths, a mortality rate of 27 per cent. These cases were all treated with surgical drainage and sulfanilamide.

Otogenic brain abscess, a complication of grave importance, occurs according to Jansen in 0.2 to 0.3 per cent of cases of chronic otorrhea. This complication is still attended by a very high mortality in spite of the measures available for its treatment.

Other complications of chronic otorrhea that we must keep in mind are:

Petrositis, in which the infection invades the petrous pyramid by way of the perilabyrinthian structures.

Cerebellar abscess, in which the infection reaches the cerebellum by way of the internal auditory meatus.

Cavernous sinus thrombosis, in which the infection reaches the sinus by way of the superior or inferior petrosal sinuses.

Septicemia, resulting from the entrance of the infection into the circulation from a thrombosis of the lateral sinus or jugular bulb.

The management of chronic otorrhea is most often a difficult task and not infrequently taxes every bit of ingenuity at our command. The Pharmacopoeia, N.N.R. and books on therapeutics devote quite a bit of space to the drugs useful in the treatment of chronic otorrhea, and recently sulfanilamide and related compounds have been credited with the magic power of a cure-all, including chronic otorrhea. Yet, when we pause for a moment and take an honest inventory of the results obtained we realize how little we can boast of them.

The degree of success we may expect in the treatment of chronic otorrhea is dependent upon the status quo of the condition when treatment is instituted. As stated above much can be done for the patient when early and energetic treatment is undertaken. Under such circumstances the condition is still amenable to medical treatment, and a fair amount of success can be expected. At this stage, however, the disease is mild and devoid of distressing subjective symptoms, and consequently it is given but casual consideration by both patient and physician.

In the advanced case, however, very little hope can be pinned on medical treatment, since the pathology may be quite advanced, and the attic, antrum and mastoid may be involved also. At this stage the patient is in danger, since an acute exacerbation may result in one or more of the serious complications. When careful and diligent treatment with conservative measures has failed, a mastoidectomy is in order, since this will establish proper drainage and render the patient reasonably immune to the serious complications that may otherwise set in.

One important fact to remember is that chronic otorrhea takes origin most often in the nose or throat, and infection in these parts if untreated will prolong, if not perpetuate, the disease. In the attempt to eradicate a discharge from the middle ear one must also treat a blocked eustachian tube, diseased tonsils and adenoids and infected sinuses, as well as boost the general resistance of the patient. Irrigation of the external canal and instillation of antiseptic power per se will not suffice and will seldom produce a cure.

In conclusion, I want to make it clear that this presentation is primarily in the nature of an appeal to the general practitioner, pediatrician and internist to take cognizance of the fact that chronic middle-ear discharge, though often mild and innocent in appearance, is a potential danger to the life of the patient and should be seriously reckoned with.

Unloading the patient with the assurance that the discharge will eventually stop is very poor medicine and often condemns an innocent victim to death.

If the physician in attendance finds himself at the end of the road in the treatment of his patient, he would be wise in consulting someone better prepared to handle the situation. Some good may still be done, and a catastrophe may be avoided.

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HYPERTENSIVE HEART DISEASE IN WHITE AND COLORED WOMEN

A COMPARISON OF NECROPSY DATA IN THE DISTRICT OF COLUMBIA

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The observation has been made in a number of papers dealing with the incidence of cardiac disease that hypertensive disease occurs more frequently in the colored than in the white race, and one report from the District of Columbia indicates that colored women particularly have this condition at an earlier age.

With this in mind, the records of 91 colored women in whom hypertensive disease had existed were selected from the files of autopsies performed by the Department of Pathology of George Washington University. No case having a valvular lesion was included, except in one instance where a mitral stenosis was accompanied by a high blood pressure reading. All borderline cases were discarded and many others in which observations were insufficient, as in cases of death soon after admission. Cases diagnosed as glomerulonephritis were included provided there was hypertension and cardiac hypertrophy.

As a control it was hoped that for each of these the record of another colored woman within three years of the same age, and free from evidence of hypertensive disease, could be found. However, it was impossible to find satisfactory controls for the whole group, particularly in the 50–60 decade, since there were more colored women at this age having some finding suspicious of hypertensive disease than without. Very few cases of traumatic death are examined on this service, and the final illness in this control group may, in some instances, have lowered the blood pressure, but in any doubtful case, a normal or small heart size was considered as satisfactory evidence of freedom from prolonged hypertension. In contrast to the difficulties in the 50–60 decade there were a number of colored women in the seventies having a normal pressure and small heart weights. From this original 91 protocols, the 50 cases having the most marked degree of hypertensive disease were selected. In every case except 2 there was neither a blood pressure record below 140/90, nor a heart weight below 400 grams, and all these women died from causes directly attributable to the hypertension. One heart weight of 350 grams in a 100-pound woman was considered distinctly above normal, and in 1 a diastolic blood pressure of 84 occurred after congestive failure had developed.

Fifty cases of white women fulfilling the same criteria were next selected, and 50 others as control cases. It will be noted that these white women represent a less severe degree of hypertensive disease than the 50 colored women, and many died from intercurrent disease. For each case, certain obvious pathologic lesions which would be recorded in any routine necropsy were noted. These are presented in tabular form. The group labelled "Additional Hypertensive" included the 41 colored women who were not matched to control cases. In table 1, the largest number of deaths in colored women occurred between the ages of 50 and 60, and only 20 of the 91 survived to the age of 60. It is interesting to compare this with figures supplied by the Bureau of the Census. The average age at death for white women in the United States for the year 1939 was 56.3, and for women of other races it was 41.5. In the District of Columbia, for white women it was 58.3, and for others 43.1. While the high tuberculosis rate will account for much of this difference, hypertensive disease must also play a part.

TABLE 1

Age at death

	AVERAGE AGE	EXTREMES	UNDER 30	30-39	40-49	50-59	60-69	70 AND OVER
Hypertensive Colored	46.6	28-70	1	12	11	18	7	1
Hypertensive White	60.6	17-90	2	1	8	14	8	16
"Additional Hypertensive" Colored	52.5	33-72	0	6	9	14	9	3

Table 2 gives an idea of the causes of death in the various groups. The average age of colored women of the first group dying from uremia was 39.2 years, from congestive failure it was 52.2 years, and from cerebral accident it was 53 years. In white women, deaths from uremia averaged 45.1 years, congestive failure 57.5, and cerebral accident 67. It is to be noted that the greatest age difference of 14 years occurred in the cerebral accident group. Coronary occlusion was not listed as the primary cause of death in any colored woman, though one healed myocardial infarct was found in the severe hypertensive group. However, small myocardial infarcts discovered post mortem in patients dying with congestive failure occurred once in the severe hypertensive group and twice in the "additional" hypertensive group. In white women this type of infarction was discovered twice, in addition to the 7 cases in which coronary occlusion was given as the cause of death.

TABLE 2

Cause of Death

	CONGESTIVE FAILURE	CEREBRAL ACCIDENT	UREMIA	CORONARY OCCLUSION	MALIGNANT DISEASE	ACUTE INFECTION	TUBERCULOSIS	MISCELLANEOUS
Hypertensive Colored	30	11	8					1*
Non-hypertensive Colored					15	19	9	7
"Additional" Hypertensive	16	11	5		1	3		5
Hypertensive White	17	11	7	7		2		6
Non-hypertensive White					24	18	1	7

* Dissecting aneurysm.

The infrequent association of malignant disease with hypertension may have been due in part to the criteria for inclusion of cases in the hypertensive groups. Many cases discarded as borderline showed an association of heart weights slightly above normal and some blood pressure readings below 140/90, and malignant disease. It is possible that by the time of death the wasting accompanying malignant disease had masked the signs of hypertension. In 2 of the hypertensive group malignant neoplasms were accidental findings.

The determination of the renal changes (table 3) was found to be the most difficult and least satisfactory part of this study, since the necropsy reports included extended over a 15-year period, during which there have been many changes in the concept and diagnosis of renal diseases. Many microscopic sections were reviewed, and the clinical histories and gross description in doubtful cases were carefully studied.

Pathologic findings in the kidneys in addition to those listed above were:

1. In the hypertensive colored—1 healed infarct, 1 calcified adenoma, 1 pyelonephritis.

2. In the non-hypertensive colored—1 acute glomerulonephritis complicating meningitis, 2 abscesses, 3 pyelonephritides, 1 tuberculosis, 1 hydro-ureter, and 1 septic infarct. In the 3 cases diagnosed as arteriolar nephrosclerosis, 1, aged 63, had one blood pressure reading on the borderline (140/90) but a small heart. The other 2 had early arteriolar changes.

TABLE 3

Vascular and Glomerular Renal Changes

	ARTERIOLAR NEPHROSCLEROSIS	CHRONIC GLOMERULONEPHRITIS	MINIMAL TO NORMAL	ARTERIOSCLEROTIC
Hypertensive Colored	47	3		
Non-hypertensive Colored	3		45	2
"Additional" Hypertensive Colored	37	3		1
Hypertensive White	44	2	2	2
Non-hypertensive White	3		32	15

3. In the "additional" hypertensive group, incidental findings were 1 bilateral nephrolithiasis, 1 slight coarctation of the aorta with chronic glomerulonephritis, and 1 perinephric abscess.

4. In the hypertensive white group, 1 woman with minimal renal change, aged 40, had a pituitary tumor with acromegaly; in the other case, the normal appearance of the kidney could not be explained since this woman, aged 58, had a blood pressure of 150/95 and a heart weight of 925 Gm., with myocardial damage but no valvular lesions. Only 2 cases appeared in this group below 30 years of age. One, aged 17, had congenital hypoplasia of both kidneys, with cystic changes. The second had a tuberculous kidney on the right, and pyelonephritis on the left, with hypertension and cardiac hypertrophy which appeared to develop following delivery 8 months before. Incidental findings were 1 infarct, 1 previous nephrectomy and 1 nephrolithiasis.

5. In the non-hypertensive white group, the 15 classified as having arteriosclerotic renal changes were all past 66 years of age, and although the kidneys showed some areas of marked atrophy, other areas were normal in appearance and seemed to be functioning adequately. Arteriolar nephrosclerosis appearing in this group was of an early type. In addition, there was 1 pyonephrosis with renal calculus, 1 renal calculus, 1 multiple abscess and 2 tuberculosis.

Table 4 shows the incidence of three other common diseases. A diagnosis of syphilis was made if there was: (1) positive serologic evidence of infection, (2) history of previous infection and antiluetic treatment, or (3) anatomic evidence at autopsy, as luetic aortitis. However, all cases having definite luetic heart disease and valvular deformity were excluded from this study. The incidence of syphilis is remarkably uniform in the hypertensive and non-hypertensive groups, although it occurs about twice as often among colored women.

TABLE 4

Syphilis, Tuberculosis, Gallstones

	SYPHILIS	TUBERCULOSIS		GALLSTONES	PREVIOUS CHOLECYSTECTOMY
		Healed	Active		
Hypertensive Colored	8	11		5	1
Non-hypertensive Colored	8	13	9	6	1
"Additional" Colored	7	14		4	
Hypertensive White	4	23		14	1*
Non-hypertensive White	3	20	2	9	4

* Postoperative death.

Healed tuberculosis was diagnosed when there was: (1) apical scarring, or (2) caseous or calcified tubercles. It was surprising to find that the incidence of healed tuberculosis was higher in the whites, although active tuberculosis was higher in the negro. In our files active tuberculosis is especially frequent in colored women under 30 who have not reached the age in which hypertensive disease most often occurs.

Gallstones were found with nearly equal frequency in the hypertensive and control groups. The greater incidence in white women may have been due to the more advanced age.

TABLE 5

Nutritional State

	OBESE	AVERAGE	EMACIATED
Hypertensive Colored	15	32	3
Non-hypertensive Colored	9	18	23
"Additional" Colored	9	20	12
Hypertensive White	9	28	13
Non-hypertensive White	3	29	8

Table 5 indicates the nutritional status in the various groups. Obesity is considerably more frequent in the hypertensive groups, and is more frequent in colored than in white women. However, since a number in the control group died from conditions such as tuberculosis and malignant disease leading to emaciation, this difference would probably be less marked if there had been available, as controls, individuals dying from traumatic causes or acute illnesses. On the other hand, many women in the hypertensive group probably lost weight during their last illness.

TABLE 6

Fibromyomata

	MARKED	FEW	HYSTERECTOMY
Hypertensive Colored	18	11	6
Non-hypertensive Colored	8	9	7
"Additional" Colored	15	8	7
Hypertensive White	4	13	3
Non-hypertensive White	3	10	7

Marked fibromyomatosis was diagnosed when fibromyomata were sufficiently numerous or large to definitely distort the uterus (table 6). Fibromyomata were much more frequent in colored women, and especially frequent in colored women with hypertensive heart disease. It does not seem probable, however, that this finding has any significance, because (1) they are not notably increased in hypertensive white women, and (2) it was observed by Dr. Roger M. Choisser, who reviewed the findings in 700 autopsies performed in Haiti, that while fibromyomata are common among Haitian women, hypertensive heart disease is rare (personal communication). It is probable that many hysterectomies were performed for fibromyomata, but accurate information on this point was not available.

Apparently obesity and fibromyomata both occur frequently at the age when, and in a group of women in whom hypertension is also frequent.

Conclusions

It is regretted that in preparing this paper a larger number of cases were not available, and especially that a more nearly "normal" control group could not be found; however, since it involved a search through more than 2,700 autopsy protocols, and since an attempt has been made to compare cases with regard to age, sex and race, the findings seem worth noting.

It appears from this review that:

1. Hypertensive heart disease with a fatal outcome appeared about 10 years earlier in colored than in white women.
2. The incidence of syphilis and gallstones was similar in hypertensive and non-hypertensive women.
3. Tuberculosis is more frequent in colored women free from hypertensive heart disease.
4. Obesity and fibromyomata of the uterus were more common in a group of hypertensive women than in a control group.

The death rate from tuberculosis for the entire United States for 1938 was 48.6 per 100,000 population which is 9.3 per cent below that of 1937 and the greatest single annual decline in three decades, except for the phenomenal fall in the death rate just after the war in 1918. This figure was obtained by direct correspondence with health officers of various states. J. S. Whitney: Am. Rev. Tuberc., August, 1939.

REST AND PROTECTION TREATMENT OF ANTERIOR POLIOMYELITIS*

Milton C. Cobey, M.D.

Instructor in Clinical Orthopedic Surgery, Georgetown University School of Medicine

The development of this treatment began with Lovett and Taylor many years ago. It was their belief that all paralyzed muscles should be immediately splinted and protected from stretch by the application of splints and casts. They did not, however, carry this treatment further than the acute stage of muscle soreness and began activity in braces as soon as possible. MacNamara of Melbourne, Australia, made the next important contribution in 1932, with her special frame and bed. The purpose of this was to increase the period of rest up to two years or until she could find no further improvement in muscle power and then to begin active physiotherapy. Her frame is now obsolete, but her essential contribution of prolonged and protected rest is the basis of our present treatment.

The old treatment of getting the patient up in splints and braces as soon as the muscle soreness had passed off and the early institution of vigorous physiotherapy proved to be a most unsatisfactory method of treatment. In order to stimulate paralyzed muscles faradic current therapy was used extensively, after which for a period exercises were used and finally the so-called water therapy. It became evident from this overtreatment that the paralyzed muscles were constantly being put on a stretch and more often overstretched by taking the extremity through the entire arc of motion. This point has been demonstrated many times, namely, that the power diminishes rapidly in partially paralyzed individual muscles as recorded on the muscle check chart before and after overstretching exercises. As everyone knows, deformities developed in spite of the most ingenious braces. The strong, uninvolved opposing muscle groups constantly pull against paralyzed or partially paralyzed muscles causing deformities to occur and become permanent. A constant stretch is put on the paralyzed muscle, and atrophy and fibrosis rapidly follow. These changes in the unprotected muscle after the loss of nerve power have been shown microscopically by the work of Towers, Cook and others.

It therefore became obvious that a paralyzed muscle must be treated with as good hygiene as with any torn or injured ligament. In anterior poliomyelitis there is a spotty type of paralysis usually involving only groups of muscles. There is also an equally varied amount of involvement in the anterior horn cells themselves from slight to severe damage to complete cell death. One does not know at the onset of the disease the severity of the individual cell involvement, but he does know that power may return to a given protected muscle any time from one week to eighteen months after the onset. No improvement has been demonstrated after that period of time.

In order to simplify the treatment the disease is divided into three stages, the acute, subacute or convalescent, and the chronic or reconstructive. The acute stage lasts from the onset until the muscle soreness disappears, from three to six weeks; the subacute stage exists until all muscle power that is going to return has been permitted to do so, which may be up until eighteen months. The chronic stage is the period of reconstructive procedures.

As soon as the diagnosis has been established and the paralysis begins to make itself evident, rest and protection of the paralyzed muscle should be begun. This is possible for any physician to do.

Out of the Toronto epidemic in 1937 came the plan of having available free of charge sets of easily applicable splints for patients of all sizes, delivered on request from a central station, which will protect the muscles in a gross way through the acute stage. These splints were used successfully in the epidemic in upper New York State last fall. They were shown to the profession for the first time at the meeting of the National Academy of Pediatrics at the Mayflower Hotel last month.

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* Read before the Society, May 15, 1940.

The Bradford frame is ready to use, and the arm and leg splints are covered with sponge rubber and soft leather. These complete sets for all ages have been made up in sufficient numbers for large epidemics and are now available through the National Foundation for Infantile Paralysis. A telegram giving the length of the child and the length of the arms and legs may be sent directly to the offices of the National Foundation for Infantile Paralysis, New York, and by special delivery the complete set will be mailed directly to the requesting physician.

These splints, attached as they are to the frame, will protect the muscles in as nearly neutral position as possible until the muscle soreness has worn off and an accurate check of the individual muscle involvement may be made. The Toronto splints are then removed, since they do not give individual muscle protection. A check of the power in the paralyzed muscles is then made and recorded on charts as being from zero power to 100 per cent. With this information plaster shells are prepared for the patient which place each individual muscle so that there can be no stretch upon it, and it is therefore at complete rest. This is done with special plaster splints and covered with cellulose acetate dope which makes it doubly strong, allowing for a very light cast which is also waterproof. Where it will be necessary to change the position of the foot or leg to favor a muscle which is regaining its power more slowly than the others, the casts are cut and soft strap iron loops put in as seen in these leg casts. It is just as important to protect the small muscles as the large; hence the metatarsal pad in the foot and the opponens pollicus cuffs for the hand and thumb are used.

During this stage physiotherapy is limited to gentle massage to the skin such as one would give in the daily bath of the patient. After a muscle has returned to 50 per cent of its normal power, which means that the part may be actively moved against the pull of gravity, gentle active and passive exercises are begun. Care is taken never to overfatigue the muscle, since this will cause it to lose power rapidly. When 70 per cent of power has returned, active exercises in braces in and out of water may be begun.

Middle ear infections yield to sulfanilamide treatment. If sulfanilamide is given early enough, before bone destruction occurs, the duration of the discharge of pus from infected middle ears is diminished by about 50 per cent and the chances of a mastoid operation becoming necessary are also reduced by about the same percentage, WESLEY C. BOWERS, M.D., New York, declares in *The Journal of the American Medical Association* for July 20, 1940 as the result of his analysis of a series of 793 of such ear infections, 396 of which received drug treatment.

Not only did drug treatment reduce the duration of discharge but the number of recoveries increased from 67 to 81 per cent, the doctor says.

The infection of a middle ear often spreads to the mastoid, which is why Dr. Bowers warns that "at times it is necessary to stop the drug in order to obtain the true picture, as the drug cures the middle ear while progressive bone destruction is taking place in the mastoid. Sulfanilamide may also so obscure the clinical picture that there is an increased danger of the unheralded sudden onset of grave complications. All the symptoms of mastoiditis (inflammation of the mastoid) may disappear under the influence of these drugs, while the lesion is actually spreading."

When conditions strongly suggest surgical removal of the mastoid, Dr. Bowers advises that it is safer to operate than to depend on drug treatment. After an uncomplicated surgical removal of the mastoid he says it is better not to give the drug. Complicated mastoiditis requires intensive drug treatment, however.

Although the benefits of sulfanilamide in the treatment of infections of the middle ear and mastoid are great, Dr. Bowers warns that the drug "has changed the clinical picture of mastoiditis and its complications so much that it produces a false sense of security and demands a new interpretation of the clinical picture."

GENERAL PRINCIPLES OF LABORATORY PROCEDURE IN CASES PRESENTING ALBUMINURIA

Harold E. Ragle, M.D., F.A.C.P.

Commander, Medical Corps, United States Navy

Many books have been written upon the subject of albuminuria. It is futile to attempt to cover more than the general principles of laboratory procedure in cases presenting albuminuria in the allotted ten minutes. It is hoped, then, that briefness and omissions will be pardoned.

The normal amount of coagulable protein in the urine is 30 to 60 milligrams. When more than this amount is present the clinical condition called albuminuria exists, even though a small quantity of globulin is also involved When this occurs it is necessary not only to consider the functional and organic causes but the question as to what further laboratory procedures may be of benefit in differential diagnoses.

From the clinical viewpoint the causes of albuminuria, or better, proteinuria, may be considered to be either functional or organic. In the functional group may be placed those cases of transitory albuminuria brought on by such causes as heavy exercise, severe mental strain, prolonged exposure to cold, or even by excessive ingestion of protein. Quantitatively, the amount of albumin is usually small, a point of some value, although sometimes the amount may be quite large. Repeated tests, however, show that the condition is not permanent, and rarely renal function tests or any chemical examination of the blood are necessary. If casts and blood are found in the urinary sediment of these cases we must suspect an underlying incipient impairment of renal function, and then renal function tests will be found necessary.

Special mention is made of orthostatic albuminuria because of its common occurrence. In such cases tests for urinary protein should be requested after the individual has completely emptied the bladder and has had a period of horizontal rest. These cases do not show any abnormalities in the microscopic examination of the urinary sediment.

In cases of premenstrual albuminuria the condition is in direct time relationship to the menstrual cycle. In pregnancy, albuminuria is a common finding. Many of these cases clear up after delivery, but all should be carefully investigated for evidence of renal failure. This is especially true if repeated quantitative studies show increasing amounts of protein in the urine. Renal function tests and chemical examination of the blood for nitrogen retention should be done.

The organic causes of proteinuria have been conveniently classified as prerenal, renal and post renal. The prerenal causes are occasioned by interference with the normal circulation of blood in the kidneys. Examples of such conditions are cardiac diseases, ascites, leukemias, hyperthyroidism, intestinal obstruction, hepatic disease, and, questionably, drug poisonings.

Renal causes are those resulting from organic lesions of the kidney, such as glomerulonephritis, nephrosclerosis, nephrosis, and the destructive lesions of the kidney, e.g., tuberculosis, malignant lesions and abscesses.

Post renal causes include such inflammatory conditions as pyelitis, ureteritis, cystitis, prostatitis and urethritis. Tests for albumin are positive whenever considerable pus or blood is present. Quantitative estimations of protein are small, and the microscopic examination shows the presence of large numbers of pus cells, red cells, or both. Laboratory examination gives little more information, but the clinical side is as a rule clearcut, and it is usually not necessary to resort to renal function tests or to chemical examination of the blood.

Prerenal and renal diseases associated with albuminuria cannot always be differentiated.

In both, the renal changes are responsible for the albuminuria, although the primary cause may be prerenal, and functional tests show renal impairment. Both may have abnormal microscopic findings in the urine as well as nitrogen retention in the blood.

Various laboratory studies, i.e., quantity of albumin passed, the urinary sediment, renal function tests, and the blood chemistry findings are necessary, since not only do they indicate the severity of the process, but frequently they also suggest the more likely location of the cause, prerenal or renal. The largest amount of urinary protein is usually present in the so-called nephroses, in which more than 110 grams have been eliminated in 24 hours. The albumin-globulin ratio becomes reversed, and a protein deficiency edema develops. This loss must be considered in planning the patient's diet.

The general principles, cited by Fishberg, should be a helpful guide for the clinician in seeking aid from the laboratory for diagnostic purposes. He points out that when renal impairment is suspected the specific gravity concentration test should be employed first. If the patient passes over 600 c.c. of urine in 24 hours and is able to concentrate to 1.020 or more, renal impairment is not probable. When impairment is noted by this test the urea clearance test, probably the most accurate test of renal function, will reveal some measure of the severity of the process, and when repeated it will serve to indicate the progress of the disease.

Again, when the specific gravity concentration test is not normal, it is advisable to resort to chemical examination of the blood. Either the nonprotein nitrogen or the urea nitrogen content should be determined. Estimations of uric acid, amino nitrogen, and creatinine offer no information which the single urea nitrogen does not reveal. Late in renal insufficiency creatinine accumulates in the blood stream and its determination in such cases may be of some prognostic value.

The inorganic constituents of the blood may be increased but their determination offers no information not ascertainable by the urea nitrogen content.

The determination of nonprotein nitrogen, urea and creatinine in the urine are usually of much less value than the determination of their levels in the blood. It is to be remembered that the heat-acetic acid test for proteinuria may give false positive reactions because of the possible presence of bile salts, resins, and the Bence-Jones protein. The sulfosalicylic acid test does not react to these substances with the exception of the Bence-Jones protein, which may be suspected by the presence of curdles in the coagulum and confirmed by the characteristic reaction of this protein with thermal changes. Alkali reserve estimations are of value if the blood urea nitrogen is over 20 milligrams. The regulation of the diet and alkali intake of these patients to maintain alkali reserve may be a lifesaver.

N. B. The opinions or assertions contained in this article are the private ones of the writer and are not to be construed as official or reflecting the views of the Navy Department or the Naval service at large.

The rapid decline in tuberculosis mortality rates has been due mainly to lessening in the incidence of infection. Among those infected, the toll though diminished, is still appalling. Mortality statistics, morbidity reports, autopsy examinations, tuberculin tests and X-ray surveys, indicate that about half of all infected individuals develop clinical tuberculosis, and that from 10 to 20 per cent of them eventually die of the disease. The high risk of disease and death due to infection by the tubercle bacillus justifies increased efforts for its prevention. EMIL BOGEN, M.D.: Am. Rev. Tuberc., August, 1940.

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EDITORIALS

ARE AMERICANS GETTING SOFT?

One reason advanced for the downfall of France is that she had gone soft. Too many people wanted to belong to the "preferred class." They believed that a great deal was due them for a little effort, and though they contributed little, they demanded that they be amply rewarded. The result was that there was internal strife, distrust and weakening of moral fiber. In consequence there followed a general breakdown of the country's social and economic structure which led in part to her defeat.

Is the United States in danger of pursuing the same course? To those who read their newspapers thoughtfully, there is ample evidence of a trend in this direction. Reports emanating from various parts of the country give the impression that the robust and courageous spirit which helped build this country into a great nation is waning. One reads of people being supported by the government rather than working, even though their income may be considerably less. Labor unions are endeavoring to reduce working hours to a number that fifty years ago would have seemed incredible. Youth organizations proclaim their allegiance to foreign isms and protest against preparedness plans. Peace advocates go so far as to assert their willingness to be subjugated rather than fight in the defense of their country. Politicians are playing the dangerous game of straddling the fence where issues which affect our very existence are concerned.

Steps which have been taken to improve the lot of the worker are deserving of the highest commendation. Free speech should be defended as fundamental to our form of government. This country should advocate and earnestly promote peace. But there is a point in all these things beyond which this country cannot go with safety. It is a well-known biological principle that suffering and overcoming hardships is necessary and important in developing a strong people. Too much paternalism, too much coddling, and too much comfort will contribute to disintegration. Unless our people are willing to forego some of what they now think are necessities, and if necessary fight for the continued existence of our country as we know it, we may well find ourselves in a critical situation.

Reports on the health of the nation reveal that the American people generally are in much better physical condition than they have ever been in their history. It is reported that a high percentage of those now enlisting in the military forces easily meet the physical requirements. Apparently, more than mere physical well-being is necessary. Can it be that due to soft living we have become morally and spiritually weak? What happens to this country in the next few months may provide the answer.

We, as medical men, fulfill our professional obligations when we see to it that the people for whom we are responsible are physically fit. It is our duty in these times to do our daily work with modesty, enthusiasm and sincerity, conducting ourselves in accordance with the highest traditions of our profession. We are also obligated as citizens to give active and intelligent support to our government, combating all forces that would destroy it. By so doing, we will contribute our share toward strengthening our country.

WHAT IS YOUR MEMBERSHIP WORTH?

Among the members of any organization are those who know little about its activities or who do not endeavor to inform themselves, yet are inclined to be critical. There are the ones who say, "Why should I belong? What do I get out of it?" And it may be true that the individual who makes these remarks does get very little out of his organization, because not all organizations have anything to offer. But before a member makes up his mind, he is obligated to ascertain whether he is at fault.

These generalizations apply to medical societies. Wherever one goes in the United States there are a few physicians who feel that their societies do little for them. Some have frankly complained that they have not received adequate monetary returns, considering their investment in dues. If this is the basis on which they judge their memberships in medical organizations, they had better not affiliate themselves.

The primary purpose of a medical society is to advance scientific knowledge, thereby raising the standards of medical practice. If it does not meet this responsibility, it has failed. There are, of course, other obligations. These are at present manifold and cover a wide field. For example, there is a great need for medical leadership in public health work. Problems arising out of the dislocation of our economic and social order continue to require thoughtful attention. Satisfactory relations with various political, civic and social bodies are exceedingly important.

A complete list of a modern medical society's obligations would be a long one indeed. The question of whether or not a society meets its responsibilities adequately can, of course, only be learned by investigation. Here is where the responsibility of the rank and file of the membership begins. A member owes it to his society to read the material provided him and if this does not furnish him with enough information, he should seek it from an official source. Should he then not agree with what is or is not being done, he should make his views known to the society for such action as it deems best. This constitutes being a good member.

In the District of Columbia, the Medical Society has in recent years been in the process of developing a program which will benefit every member. Some of the projects undertaken have been successfully completed, others are under way. The support given the Society by its membership has been heartening. Indifference of some and the misconceptions of others have, of course, still to be overcome. It is hoped that when this organization year is in full swing, greater numbers of the membership will recognize that the future of our medical society lies largely in their hands, and that the value of their membership is dependent upon their active interest.

KOBER LECTURER CHOSEN

As most members of the Medical Society know, the late Dr. George M. Kober created an endowment fund to be held in trust by Georgetown University. This fund was to be invested by the University and the income therefrom used as designated by Dr. Kober. Among other things, he specified that a lecturer, to whom an award would be given, was to be chosen every third year by the Medical Society's Executive Board from members of the Washington Academy of Sciences, the National Tuberculosis Association, the Medical Society of the District of Columbia and the Anthropological Society of Washington. As this is the year in which the Board must make its selection, it requested the above organizations to present the names of nominees. From a list of well-known scientists, Dr. John R. Mohler, Chief of the Bureau of Animal Industry, was finally chosen.

Dr. Mohler is a member of the Washington Academy of Sciences and for the last forty-three years has been intimately identified with the investigation of diseases of animals communicable to man. During the time that he has been an official of the Bureau of Animal Industry, he has initiated successful campaigns for the eradication of bovine tuberculosis, a disease which is especially transmissible to children, and bovine contagious abortion, which manifests itself in man as undulant fever. In notifying Dr. Mohler of his selection as the Kober Lecturer, the Board requested that he present a paper on "Undulant Fever."

Who's Who in America, 1940–1941 lists Dr. Mohler as a pathologist. He was born in Philadelphia, May 9, 1875. He graduated from Temple University in 1893 and received the degree of Doctor of Veterinary Medicine from the University of Pennsylvania in 1896. Honorary degrees of Doctor of Science have been conferred upon Dr. Mohler by the following universities: University of Pennsylvania (1925), Iowa State College (1920) and University of Maryland (1928). Dr. Mohler is a member of numerous scientific bodies, among them the American Public Health Association, Royal Society of Medicine (Great Britain) and the Society of Experimental Biology and Medicine. He was President of the American Veterinary Medical Association in 1913.

Dr. Mohler is known as a forceful and effective speaker. It would seem, therefore, in view of his splendid record of achievement and his natural abilities, that a very fine choice has been made.

Notification of the Board's selection has gone forward to Rev. Arthur A. O'Leary, S. J., President of Georgetown University. The lecture will be given under the auspices of the University at Gaston Hall on March 28, 1941. Members of medical organizations, scientists and others who are interested in the subject under discussion will be invited to attend.

PERTINENT PARAGRAPHS

July Meetings Despite the fact that a number of physicians are away on vacations and the weather in Washington has been extremely warm, meetings of boards and committees have continued. The following meetings were held during the month of July:

July 2	Committee on Radio Education
July 6	Cancer Control Committee
July 8	Medical Bureau Committee House Committee
July 9	Committee on Public Relations
July 11	Subcommittee on Scientific Exhibits, Annual Scientific Assembly
July 15	Obstetrical Board
July 16	Advisory Committee to Washington Self-Help Exchange and Goodwill Industries of Washington
July 17	Executive Board
July 19	Medical Bureau Committee
July 22	House Committee
July 30	Medical Bureau Committee Subcommittee on Finance, Annual Scientific Assembly

Group Hospitalization Payments Due

Dues to Group Hospitalization, Inc. for the ensuing six months must be paid before September 1 by members of the Society who are subscribers. Those who are not now subscribers and wish to participate may obtain application forms at the Medical Society's office.

Some physician-subscribers are still making their checks payable to Group Hospitalization and mailing them directly to its offices although it has been announced on many occasions that payments should be made directly to the Medical Society, which is the collecting agent. Members are reminded again that checks for Group Hospitalization dues should be made payable to the Medical Society and mailed to its office.

A new type of contract is now being issued by Group Hospitalization which has been designated as "Special No. 1 Contract." Physicians who hold Subscriber-Spouse (No. 2) or Subscriber-Family (No. 3) Contracts may now obtain Group Hospitalization benefits for their unmarried dependent children between the ages of 18 and 25.

Benefits of the new contract are identical with those offered in the Subscriber (No. 1) Contract. In fact, the dependent is issued a regular No. 1 certificate.

A special application signed by the subscriber and dependent is required for each eligible dependent for whom participation is desired. When the dependent's application has been accepted, it will be continued only during the participation of the original subscriber and until the expiration of the contract year in which the dependent has attained the age of 25 years.

The rate for this contract is 65 cents per month, which must be paid through the group in which the original subscriber participates.

Any physician who holds a No. 2 or No. 3 contract may enroll dependents entitled to a "Special No. 1 Contract" for participation beginning September 1.

The number of physicians subscribing to Group Hospitalization is constantly increasing. Undoubtedly, in time the majority will find it to their advantage to subscribe. Reports received from members now participating indicate that those who have received benefits under their contracts have been very well satisfied. There were 300 enrolled on August 1 as compared with 251 a year ago.

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More on Preparedness

A communication received from the American Medical Association's Committee on Medical Preparedness indicates that on July 29, 873 or 38 per cent of the 2,243 physicians in the District had returned the questionnaires sent them recently.

As preparedness plans in various fields are being speeded up, it is important that the medical profession do its part. It is hoped that the physicians in the District will not fail to forward their forms as promptly as it is possible for them to do so. This will not only be helpful to the Committee but to the physicians themselves. If they do not return their questionnaires and an emergency should arise, which it would appear is now possible, they will have to take their chances on receiving assignments to the tasks for which they are best fitted.

The representative from the District of Columbia to the Committee on Preparedness is Dr. F. X. McGovern, Chairman of the Executive Board. He is also a member of the Medical Society's Committee on Medical Resources, members of which are Dr. Daniel L. Borden, President of the Society, who is the chairman, and the Secretary, Theodore Wiprud, who is also secretary of the Committee. This committee proposes to make its own survey of the medical situation in the District for the purpose of ascertaining the various military services in which members are now enrolled. Furthermore, it will determine what steps will be necessary to protect the health of the civilian population. Assistance will also be given physicians who may enter the military service or who, for one reason or another, remain at home.

There is no doubt now that greater demands will be made by military and civil authorities upon all groups of the population including the medical profession. What the nature of these will be will undoubtedly be disclosed in the next few weeks.

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Medicine Loses an Able Leader

To thousands of physicians throughout the United States, the passing of Dr. Austin A. Hayden is a great loss to medicine. Dr. Hayden had long been an official of the American Medical Association, having served as Treasurer from 1922 to 1933. Since 1933 he had been Secretary of the Board of Trustees. Few physicians have been more devoted to the welfare of the medical profession than Dr. Hayden. What attracted men most to him was his human qualities. He was a very forceful man, sometimes inclined to be brusque. At the same time he was kindly and generous, always willing to be of help where the welfare of his profession was concerned. The medical profession owes Dr. Hayden a debt of gratitude which it cannot repay. Meetings of the American Medical Association will not seem the same without the presence of the always genial and able Dr. Hayden.

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Society Supports Virginia Physicians

At the present time Virginia physicians enjoying borderline privileges with the District of Columbia must furnish the Commission on Licensure with the names and addresses of all patients treated in the District. This information is required in addition to reports of communicable disease cases. Physicians of Arlington County, Virginia have objected and have asked the Commission to waive this specific requirement.

Dr. George C. Ruhland, Secretary of the Commission, in a recent communication to the Society called attention to the action of the Medical Society in 1934 in regard to this matter. The following is a quotation from a statement issued by the Society at that time:

> "The Medical Society does not desire that the Healing Arts Practice Act should be weakened by any relaxation of its provisions for the protection of the public, which is its primary purpose. However, we desire to point out that equivalent protective laws operate in Maryland and Virginia, and that borderline reciprocity certificates are issued only upon the basis of license under those laws. We believe that the spread of the metropolitan area of Washington beyond the bounds of the federal District has made a condition affecting equally all physicians within the Washington area; those within the District finding their patients moving to suburbs beyond the border, but desiring to retain their accustomed medical relationships; while the neighboring Maryland and Virginia physicians at times find a reverse movement of families accustomed to employing them, while they are dependent upon the city to provide hospitalization of their patients. This condition, in our opinion, renders it desirable that the least restrictions, consistent with the intent of the law, should be put upon the free flow of professional activities across the jurisdictional lines.
>
> "We believe the Healing Arts Practice Act should not be utilized to restrict practice from the standpoint of competition between physicians of the neighboring states and those of Washington, and if the maintenance of strict supervision of the qualification of physicians will not be jeopardized, we recommend that sub-section (c) of Section 42 of the Act be interpreted in accordance with the spirit of this communication."

The Executive Board at its meeting on July 17 supported the position previously taken by the Society and notified Dr. Ruhland to this effect.

SHEET ANCHOR

WEBSTER DEFINES "Sheet Anchor" as a nautical term applied to anything regarded as a sure support or dependence in time of danger. This originally derived its meaning from the heaviest anchor carried on our old sailing ships. This anchor was stowed just abaft the foresheet and was resorted to in times of peril.

Recently the House of Delegates of the American Medical Association unanimously passed the following resolution: "Resolved, that this committee (Medical Preparedness) establish and maintain contact and suitable relationship with all governmental agencies concerned with the prevention of disease and the care of the sick, in both civil and military aspects, so as to make available at the earliest possible moment every facility the American Medical Association can offer for the health and safety of the American people and the maintenance of American democracy."

The American Medical Association has accepted the challenge to provide all possible medical care in the event of a national emergency. The Medical Society of the District of Columbia falls in line and pledges its support of this program. Our Society has an enviable record for its activity during the last World War. Its tradition and history insure its full coöperation with the plan outlined by the American Medical Association.

Recently there has been sent to every member of our Society a questionnaire relative to his possible fitness for military or civil service. We who are privileged to live in the Capital of this nation are called upon to lead the country in our patriotic response.

Stand by! Let go the sheet anchor!

Daniel Le Ray Borden

GROUP HOSPITALIZATION BENEFITS

E. J. Henryson

Director, Group Hospitalization, Inc.

Editor's Note: In view of the fact that Group Hospitalization, Inc., will accept new subscribers in our Medical Society group during August for September 1 participation, Mr. Henryson has been requested to make a statement of the benefits now offered under its plan.

Members of the Medical Society who are prospective subscribers will be interested in learning of the benefits being currently offered by Group Hospitalization, and members who are now subscribers may, probably, be desirous of reviewing the benefits to which they are entitled. However, there are many other reasons which impelled me to accept the invitation of the Editor to a recitation of the services we offer, among which I shall enumerate only three.

First, the Medical Society and its members have played a distinguished role in the sponsorship and development of group hospitalization in Washington. It is not only desirable but important that the various members be informed of the services offered by the organization of which they are so vital a part.

Second, it should be helpful to the physician to know of the services to which his patients are entitled.

Third, the opinion and advice of the members of the profession on all matters relating to the care of sickness are highly regarded by the public. Our representatives, in the enrollment of groups, find their work greatly simplified and facilitated when an employer tells them that "his doctor" has spoken highly of the plan and its benefits.

I am listing, therefore, in as clear a fashion as possible, the various benefits available to a subscriber.

Benefits Offered

When admitted as a bed patient to a participating member hospital a subscriber is entitled to:

Hospital care up to 21 days in any contract year for each participant.

More than one admission if necessary.

Semi-private accommodations for adult participants and juvenile ward for children.

General nursing care.

Medications except oxygen and sera.

Use of the operating room as frequently as necessary within the 21 days allowed.

Surgical dressings.

Routine laboratory examinations.

Obstetrical care or care for conditions incidental to or resulting from pregnancy in the Subscriber-Spouse and Subscriber-Family contracts after more than 10 months' participation in the plan.

Use of the delivery room to those eligible for obstetrical care.

If more than 21 days' care is needed, participating member hospitals will offer a discount of 10 per cent for accommodations similar to those offered under the plan.

Private room service in any participating hospital may be obtained by paying the difference between the rate charged for semi-private accommodations and the rate charged for the room and service desired.

Important Additional Benefits

For subscribers on whose contract no hospital service has been given in the preceding contract year and for the listed family members (if any) who have participated under such contract in the preceding contract year, the following additional benefits are offered:

Thirty days of hospital care, if needed, instead of 21 days in the current contract year; and, to provide for

Six months' care in lieu of the discount of 10 per cent offered above, Group Hospitalization, Inc. will pay, to a Participating Member

Hospital Only, one-half of such hospital's charge for room service in semi-private accommodations for any confinement beginning within the 30 days allowed above and extending continuously for a period not to exceed 6 months from the date of such admission.

The above services are available under the terms of the contract in the participating member hospitals.

Benefits Away from Home

The contracts make special provisions for hospitalization in other cities in the event of an accident or an acute illness occurring while the subscriber is out of the city of Washington and unable to utilize the facilities of a participating member hospital, such care not to exceed $5 per day for not more than 21 or 30 days.

Services Not Included

The benefits offered by this contract do not include the services of the subscriber's or family member's attending physician or surgeon, radiologist, pathologist, physiotherapist, anesthetist or special nurses.

Hospital service for pulmonary tuberculosis (after diagnosis as such), venereal disease, quarantinable disease, alcoholism, drug addiction, mental disorder, or any case provided for under the Workmen's Compensation Law is not included in the benefits offered by this agreement.

In the Hospital Service Plan for self only (Contract No. 1) no benefits are offered for obstetrical care or cases incidental to or resulting from pregnancy.

No service can be provided for the treatment of any ailment known by the subscriber or family members to exist at the time of the subscriber's application for participation in the plan.

Types of Contracts

The employed subscriber has his choice of three types of contracts:

No. 1. Subscriber Contract (which offers no obstetrical care) for which the rate is 65 cents per month.

No. 2. Subscriber-Spouse Contract at $1.50 per month.

No. 3. Subscriber-Family Contract at $1.75 per month.

The only other charge is a small enrollment fee of one dollar for each contract.

In addition to the above, there has recently been authorized a special contract to give the benefits of participation to unmarried dependent children (from 18 to 25 years) of subscribers who hold or may hold a No. 2 (Subscriber-Spouse) or No. 3 (Subscriber-Family) Contract. The rate on this contract is 65 cents per month and the benefits are identical to those of the No. 1 Contract. It is designated as the "Special No. 1 Contract."

AMERICAN RED CROSS NATIONWIDE ENROLLMENT OF VOLUNTARY BLOOD DONORS

The American Red Cross, acting at the request of the Surgeon General of the U. S. Army, has announced experimental plans for the promotion of a nationwide corps of volunteer blood donors which would become part of the national defense program, when and if needed. Chairman Norman H. Davis declared the plan would be to make available blood plasma to the U. S. Army Medical Corps in the event of emergency. For the past four years twelve Red Cross chapters have been furnishing whole blood from volunteers to hospitals for civilian use. The new program will be patterned along similar lines, using plasma instead of whole blood. The American Red Cross also has under consideration a parallel project to furnish voluntary plasma requested by the British Red Cross for the treatment of war victims.

After preliminary investigations have been completed, the Red Cross will then work out with the medical department of the Army plans for enrolling prospective donors in cities throughout the country where collecting centers will be established. In the event of an emergency the Red Cross could start delivering plasma within ten days after enrollment is completed. Blood so collected will be pooled in large sterile containers, to simplify storage, in sufficient quantities to meet the emergency needs for treating the wounded.

The recruiting of donors will be conducted by a special chapter blood transfusion committee which will include leading local physicians. The technical phases of the project will be performed by the medical staff of the coöperating hospitals. They will examine the prospective volunteers and make the necessary blood tests as well as do the actual transfusions.

ANNOUNCEMENT OF A STUDY TO EVALUATE ORIGINAL SEROLOGIC TESTS FOR SYPHILIS

More than five years ago the Committee on Evaluation of Serodiagnostic Tests for Syphilis, in cooperation with the United States Public Health Service, conducted a study to evaluate original serologic tests for syphilis or modifications thereof in the United States. The results of this study were published shortly after the investigation was completed.[1]

Consideration is now being given by the Committee to the organization of a second evaluation study of original serologic tests for syphilis or modifications thereof within the next year. If the need for an investigation of this kind seems to justify the cost, invitations will be extended to the authors of such serologic tests who reside in the United States, or who may be able to participate by the designation of a serologist who will represent them in this country. The second evaluation study will be conducted utilizing methods comparable to those employed in the first study.[2]

Serologists who have an original serologic test for syphilis or an original modification thereof and who desire to participate in the second evaluation study should submit their applications not later than October 1, 1940. The applications must be accompanied by a complete description of the technic of the author's serologic test or modification. All correspondence should be directed to the Surgeon General, United States Public Health Service, Washington, D. C.

NEWS AND PERSONALS

The first **Pan American Congress of Ophthalmology** will be held at the Hotel Cleveland, Cleveland, Ohio, October 11 and 12. This Congress is being sponsored by the American Academy of Ophthalmology and Otolaryngology in order to promote greater solidarity and a wider acquaintance among medical men of the Americas. It is expected that a permanent organization will be effected.

Papers presented at the meetings will be divided equally between speakers from the Latin-American countries and from the United States. The Congress is open to any ophthalmologist who wishes to register. Individual invitations have been sent to members of the ophthalmologic profession in Latin-American countries. Individual invitations have not been sent to ophthalmologists in the United States and Canada, but official invitations are being printed in the various journals of ophthalmology. The membership fee in the Congress is $5.00. Inquiries concerning registration may be addressed to Dr. William P. Wherry, 1500 Medical Arts Building, Omaha, Nebraska.

Previous to the Congress, October 6–11, the American Academy of Ophthalmology and Otolaryngology will hold its forty-fifth annual convention, with headquarters also at the Hotel Cleveland.

The American Board of Ophthalmology announces that there will be only one written examination during 1941. This will be held in various cities throughout the United States on March 8, 1941. Candidates enrolled in the preparatory group who have been advised that they will be eligible for examination during 1941 should make application at once to take this written examination. Application must be made on the regular blanks provided for this purpose and must be received in the Board's office before December 1, 1940.

There will be two oral examinations during 1941. The first will be held in Cleveland in May or June with deadline for case reports, February 1. The second will be held in October (place to be announced later) with deadline for case reports, July 1. Formal application blanks for the oral or written examination may be secured from the American Board of Ophthalmology, 6830 Waterman Avenue, St. Louis, Missouri.

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[1] Ven. Dis. Inform., 1935, **16**, 189.
J. A. M. A., 1935, **104**, 2083.

[2] J. A. M. A., 1934, **103**, 1705.

The American Public Health Association will hold its 69th annual meeting in Detroit, Michigan, October 8–11, 1940 with headquarters at the Book-Cadillac Hotel. All phases of health protection and promotion will be discussed. A health exhibit will be held in connection with the meeting and an Institute on Health Education is scheduled prior to the official opening. For further information address Dr. Reginald M. Atwater, 50 West 50th Street, New York City.

The 1940 Graduate Fortnight of the New York Academy of Medicine will be held October 14–25, 1940. The purpose of the Fortnight is to make a complete study and authoritative presentation on a subject of outstanding importance in the practice of medicine and surgery. This year the subject chosen is "Infections." The program will include morning panel discussions, afternoon clinics and clinic demonstrations at many of the New York hospitals, evening addresses and exhibits. The comprehensive exhibit will include books and roentgenograms, pathologic and research material, and clinical and laboratory diagnostic and therapeutic methods. Demonstrations of exhibits will also be provided. A complete program and registration blank may be secured from Dr. Mahlon Ashford, The New York Academy of Medicine, 2 East 103rd Street, New York City.

The Washington Gynecological Society has elected the following officers for the coming year:

Dr. Richard L. Silvester, *President;* Dr. W. Raymond Thomas, *Secretary;* Dr. George Nordlinger, *Treasurer.*

Howard University College of Medicine, in cooperation with the United States Public Health Service, the Health Department of the District of Columbia, and the Freedmen's Hospital, is offering a Postgraduate Course in Venereal Disease Control beginning September 21, 1940. The course is aimed to give special training in the prevention, control, diagnosis and treatment of venereal disease with a view to preparing the physicians enrolled for greater service to their country in the nation-wide program of venereal disease control. **Dr. Henry H. Hazen** will be one of the lecturers.

The **new ward building at Gallinger Hospital** was inspected by District officials on July 2. The new building, built at a cost of $600,000, is a six-story structure situated beside the Administration Building. It contains 270 beds for the treatment of internal diseases, a large X-ray laboratory, lecture rooms and an auditorium.

Dr. W. Calhoun Stirling was the guest speaker at the Annual Seminar of the Ingham County Medical Society at Lansing, Michigan, on May 5, where he presented a paper on "Injuries of the Kidney." Later he participated in a round table discussion on "Hematuria."

In collaboration with Lt. Col. J. E. Ash, Curator of the Army Medical Museum, Dr. Stirling presented a paper on "Proliferative Lesions of the Urinary Tract" at the annual meeting of the American Urological Association in Buffalo, New York on June 24. They were also awarded a prize for the material presented in the scientific exhibit.

Lt. Comdr. Don. S. Knowlton, battalion surgeon, and **Lt. Comdr. Howard H. Strine,** medical officer, of the Fifth Battalion of the U. S. Marine Corps Reserve were awarded the Marine Corps Reserve Medal, with bronze star, on July 16. Drs. Knowlton and Strine have had 100 per cent attendance records for weekly drills and field training since 1930.

Dr. Harry H. Kerr is one of the contributing authors in the Frank Howard Lahey Birthday Volume recently received at the Society's office. His contribution was entitled "The Story of Intestinal Anastomosis."

Dr. Francis I. Bloise moved to Richmond August 1 to assume his new duties as Director of Medical Service and Chief Surgeon of Virginia State Prisons.

FRANCIS RANDALL HAGNER, M.D., F.A.C.S.

(1873–1940)

A Tribute to a Classmate

There is no standard of measurement for the grief one feels at the death of Francis R. Hagner. He was universally beloved because of his kindliness of heart, his generous impulses, his happy nature, his loyalty and his impeccable integrity.

He gave to his friends a rare fellowship. He caught the radiance of the morning and was made glad. He diffused good cheer and illumined the lives of all with whom he came in contact. His was a splendid philosophy of living and he left an impress for good as he journeyed along life's highway. He lived grandly, and left a memory that will not fade.

Edward Y. Davidson

Dr. Francis Randall Hagner, nationally known urological surgeon, Life Member and former President of the Medical Society of the District of Columbia, died suddenly on July 7, 1940 at his home, 1824 Nineteenth Street. He had been confined to his home by a minor illness for ten days and was convalescing when his sudden fatal attack occurred.

Funeral services were held on July 9 at St. John's Episcopal Church, conducted by the Rev. Oliver J. Hart. The large attendance of friends and medical colleagues, which completely filled the church, attested the very high opinion in which he was held by all sections of the community.

Dr. Hagner was born in Washington in 1873, the son of Dr. Charles E. and Mrs. Isabella Davis Hagner. His family had been prominent in the history of the District and Maryland for many generations past. He was educated at the Emerson Institute and George Washington University, where he received his degree of Doctor of Medicine in 1894. He then went to the Johns Hopkins Hospital, where he became Assistant Resident in Surgery, returning to Washington to take up private practice in 1896. A few years later he began to specialize in urology. In 1905 he was appointed Professor of Genitourinary Surgery at the George Washington University School of Medicine, which position he held until 1939, when he retired and was appointed Professor Emeritus. Throughout these many years he was a most successful teacher, and inspired many of his students to pursue advanced work along his special lines. He had served as President of the American Association of Genito-urinary Surgeons, the Clinical Society of Genito-urinary Surgeons, the Clinico-Pathological Society of the District of Columbia and the Medical Society of the District of Columbia. He was a Life Member of the American College of Surgeons, a Fellow of the American Medical Association and was also a member of the American Urological Association and the Southern Surgical Association.

Francis Randall Hagner, M.D., F.A.C.S.

Dr. Hagner was the originator of several new operative procedures in the urological field, having invented the Hagner bag for control of hemorrhage following prostatectomy and devised the Hagner operation for epididymitis. He was the author of numerous medical articles in his selected field.

Apart from purely medical interests, Dr. Hagner had made studies in Western American history and in certain phases of the life and death of Lincoln, on which he was a recognized authority. His lectures on these subjects were sought after as well as his addresses on medical matters.

He possessed an unusual gift for making friends, and had a wide circle of friends and acquaintances in this and other cities. He was a member of Phi Kappa Psi Fraternity, the Metropolitan Army and Navy and Chevy Chase Clubs. It may truly be said that he was one of the most beloved as well as the most distinguished physicians of our time.

Dr. Hagner married Miss Elizabeth Allemong of Charleston, West Virginia in 1898. She and a sister, Mrs. Norman James of Baltimore, survive him.

BOOK REVIEW

In Search of Complications. Eugene de Savitsch, M.D. Price $3.00. Pp. 396. New York: Simon and Schuster, 1940.

Books written either by or about doctors have appeared with increasing frequency in late years. It is gratifying to note that a local surgeon has joined the distinguished list of authors. Dr. Eugene de Savitsch's "In Search of Complications" is an autobiography which is winning the wide acclaim it deserves. Viewing his life in retrospect, he found no dearth of material to furnish many stories within a story. So rich and varied have been his experiences, that at times the reader feels certain phases and subject matters deserve a separate book.

The presentation is lively and piquant, demonstrating what a successful result can be attained when a Russian's story is told with a decided French touch.

His experiences in America and commentaries on Americans and American life, and on the teaching and practice of medicine are no less interesting than his exile from Russia and subsequent career as an officer in the White Russian Army. His stage has been not only Russia and the United States, but Siberia, Japan, France and the Congo. He has the ability of seeing himself with an incredible air of detachment and bringing to bear much subtle, clever humor in telling his life story.

Dr. de Savitsch has not been a pawn of fortune like so many adventurers and others thrown on the world and their own resources. He seems to have had an unusual degree of mastery of his own fate, plus a lucky star which seems to have watched over him very well so far.

M. B. Y.

BOOKS RECEIVED FOR REVIEW

Acknowledgment is made of the following books which have recently been received for review:

Cancer in Childhood and a Discussion of Certain Benign Tumors. Harold W. Dargeon, M.D., F.A.A.P., Attending Pediatrician, Memorial Hospital for Cancer and Allied Diseases, New York; Associate Pediatrician, St. Luke's Hospital, New York; Associate Pediatrician, New York Foundling Hospital; Instructor in Pediatrics, College of Physicians and Surgeons, Columbia University. Pp. 111, illustrated. St. Louis: Mosby, 1940.

Medical Nursing. Edgar Hull, M.D., F.A.C.P., Clinical Professor of Medicine, Louisiana State University School of Medicine; Visiting Physician, Charity Hospital of Louisiana at New Orleans; Christine Wright, R.N., B.S., Graduate of Davis-Fischer Sanatorium, Atlanta, Ga.; Instructor of Nursing Arts, Charity Hospital School of Nursing, New Orleans 1928–1939; Public Health Nursing, St. Mary Parish Health Unit and Experience Center, Franklin, La., 1939; Ann B. Eyl, B.S., Assistant Dietitian, Cook County School of Nursing, Chicago; formerly Instructor in Home Economics, University of Kentucky, Lexington; Therapeutic Dietitian, Charity Hospital of Louisiana, New Orleans; Dietitian, St. Vincent's Infirmary, Little Rock, Ark. Pp. 588, with 168 illustrations, including 11 color plates. Price, cloth, $3.50. Philadelphia: Davis, 1940.

Frank Howard Lahey Birthday Volume. June First, 1940. Pps. 466. Springfield, Ill.: Thomas, 1940.

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THE TREATMENT OF DELIRIUM TREMENS AND ACUTE ALCOHOLIC HALLUCINOSIS

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In this work a specific measure was directed against a predominant pathologic process.

The predominant pathologic process in delirium tremens is the cerebral edema,[1,2,3] which is a striking feature on the autopsy table and sometimes the only noteworthy finding. But the subjects frequently suffer also from general dehydration, which has obscured the issue and confused the outlines for therapeutic attack. Some authors have recommended hydration[4] and others dehydration;[5] the lines between these apparently opposing ideas have not been clearly drawn,[6,2,7] successes and failures having been attributed to both procedures.

The mental symptoms and the tremors, however, dominate the picture, and it should be clear that the cerebral edema is the more insistent disorder. But both pathologic processes may be attacked at the same time. The process that caused the cerebral edema at the expense of general body fluids should be reversed. If hydration is pressed before the water balance is restored, one should fear that the cerebral edema would increase. The cure of somatic dehydration might not turn the tide.

Darrow[8] points out that the dehydration syndrome may occur without absolute loss of body water, as a result of a shift of fluid from the extracellular system to the intracellular, the extracellular being blood, cerebrospinal fluid, interstitial fluid, etc. But doubtless a shift within the extracellular system, from blood and somatic interstitial fluid to the cerebrospinal fluid can also occur, and might be expected to produce similar effects. Such a shift occurs in acute alcoholic psychosis. Certain controls must be disordered for this to occur.

The volume of extracellular fluid cannot be maintained without normal amounts of sodium and chloride ions, even if the total amount of body water remains normal.[9] Darrow estimates that in extreme cases of dehydration as much as one third of the total extracellular electrolyte may be lost,[8] and states it is futile to treat dehydration by water and dextrose alone. Dextrose is not an electrolyte. The osmotic equilibrium is maintained principally by shifts of water, which moves through cellular membranes in response to osmotic forces. The claim by Hilton and Alderson,[10] using sucrose, that "we can expect to decrease any degree of intracranial edema because of the hygroscopic effect of sugar" does not always work out in practice, as many patients have died when reliance was placed upon sugar for osmotic action.

I believe that certain experimental work done, indicating danger of a later rise in the cerebrospinal fluid pressure after the initial fall from intravenous hypertonic saline, should be discounted. The protocols of these experiments[11] show, for example, that 75 c.c. of 30 per cent and 100 c.c. of 15 per cent saline were used on dogs weighing perhaps 2 or 3 Kg. While righting the water balance, hypertonic saline is conceived of as being ultimately diluted to the strength of normal saline, so that the above amounts of hypertonic saline for human beings of average weight should be thought of as resolving into from 40 to 80 liters of normal saline, which is far beyond anything recommended clinically. Therefore, although the experiments are of academic interest, they indicate no bar to the use of 5 per cent saline in amounts of a few hundred c.c.

An early observation of mine, in 1914, in a case of puerperal eclampsia showed that when fluid from the bowel and isotonic saline given subcutaneously were absorbed, the patient developed acute pulmonary edema, with profuse exudate of fluid pouring from the mouth and nose. The patient was drowning in her own secretions and death seemed imminent, when it occurred to me that I might correct the process by giving hypertonic saline subcutaneously, which by osmosis would withdraw the fluid from the blood and then from the lungs. An effect was observed in twenty minutes, and the pulmonary edema disappeared in short order. When reporting this case[12] I suggested that hypertonic saline might be used in cases of cerebral edema, as well as for other conditions. In 1916 Hogan[13] of England reported on work in the Emergency Hospital service in San Francisco, California, where he treated 64 cases of acute alcoholic delirium with a hypertonic solution of mixed salts given intravenously. He used appreciable quantities of a relatively weak solution and also used dextrose. The results were good as regards mortality, and a rapid effect was shown in controlling the violent delirium. In 1919 Weed and McKibben[14] reported their classical experiments on the effect of hypertonic solutions given intravenously on the cerebrospinal fluid pressure, causing a marked lowering, and they properly related the result to the change in the osmotic value of the blood. They understood that the fall in pressure took place by fluid readjustments. Foley[15] in 1923 reported similar effects from oral and intravenous hypertonic salt, and showed that there was a definite change in the direction of the cerebrospinal fluid currents. Instead of fluid being secreted by the choroid plexus, it was absorbed there and elsewhere. In 1928 Kubie and Hetler[16] reported their conclusion that the volume of intracranial blood was increased as the volume of cerebrospinal fluid was diminished by the action of the hypertonic saline. Intravenous hypertonic saline solution has been used clinically for some conditions and sodium chloride has been used more recently in a group of disturbed cases, among which were some delirious alcoholic cases. But Bowman and Keiser,[6] when reporting these cases (Bellevue Hospital), laid special stress on the dehydration in evidence, and said they decided that edema of the brain should be disregarded and that treatment should be only for acidosis and for dehydration. They, however, reported very good results, and there can be no doubt that the cerebral edema was substantially relieved. They noted that when the patient was kept thirsty awhile, the beneficial effect was more marked. They preferred to give the salt orally. At the same time Bowman, Wortis and Keiser[4] reported the treatment of alcoholic cases at Bellevue Hospital, with a low mortality. In this treatment special stress is placed upon the treatment of somatic dehydration.

ESSENTIAL TREATMENT

After February 8, 1939, the essential treatment used in the psychiatric department of Gallinger Municipal Hospital, Washington, D. C., in practically all cases of acute alcoholic psychosis including delirium tremens, and in certain other alcoholic cases, was to give hypertonic sodium chloride solution intravenously. Injections of 100 c.c. of 5 per cent solution and later 150 c.c. were given twice daily, with sometimes an initial dose of 200 or 250 c.c. It should be important to discover if hypertonic salt so given may be regarded as a specific cure for the condition, and so the uncomplicated cases are considered apart from those with some definite medical or surgical complication.

RESULTS AND STATISTICS

No uncomplicated case that received the treatment for at least 2 consecutive days died in 1939. It is suggested as a minimum standard for the present that when a patient does not live for 48 hours, the treatment has not been put into proper effect. The complicated cases showed a definite diminution of mortality. The figures given below, however, include all cases, even those of much less than 48 hours' duration.

Deaths occurred in only 4 uncomplicated cases in 1939 after February 8, and none of these received the treatment for one reason or another. In the same period deaths occurred in 16 complicated cases. Death occurred in only 1 case in which a complication was not definitely established in the first 6 months of 1940. This case was in the hospital less than 48 hours and had insufficient saline. Arriving in coma, he immediately had a convulsion. He had high fever, some abnormal signs in one lung and some symptoms of infection, with a leukocytosis of 15,500 and 53 per cent band forms. In the same 6 months' period, 327 patients were given the saline treatment. In 1937 there were 274 cases of alcoholic psychosis in 1,289 alcoholic admissions. Of these, deaths occurred in 16 cases of uncomplicated alcoholic psychosis and 31 complicated cases.

Cline and Coleman[5] in New York stated in 1936 that deaths reported in the literature ranged from 5 per cent to 50 per cent. In their own 157 cases they reported a mortality of 3.82 per cent. Moore and Gray[17] believed the deaths were increased to 1937. Leary[18] reported about 10 per cent mortality in the Boston City Hospital in 1935. Complementary figures by Dynes[19] from the Boston Psychopathic Hospital were 9 deaths in 382 cases.

Piker and Cohn,[3] reporting a 5.3 per cent mortality in the Cincinnati General Hospital, stated that the mean mortality of cases, and not including all complications, was from 10 per cent to 12 per cent; one report gave a 37 per cent mortality. Bowman, Wortis and Keiser,[4] at the Bellevue Hospital, N. Y., reported a fall in mortality from 17.3 per cent to 4.6 per cent with improved treatment, the last among a group of 65 cases. The deaths from "alcoholism" in New York State in 1938 were 412.[20] United States Vital Statistics[21] shows reported deaths from "alcoholism, acute and chronic" were 3,714 in 1936 and 3,305 in 1937.

The effect of the hypertonic saline treatment is very striking to one who has seen alcoholic patients treated without this measure. Patients now become quiet very soon, and the period of noisy delirium is usually cut down to an hour or a few hours. It appears that cases of delirium tremens have been prevented and other cases aborted. Repeaters who have passed through other attacks often comment definitely upon the quick improvement in their ability to think. The treatment has had a marked effect on the whole atmosphere of the admission wards. Whereas, formerly the admission building of the psychiatric department in the Gallinger Municipal Hospital, where these alcoholic cases are treated, was frequently a noisy place with several delirious, noisy cases dominating the scene at one time, it is now a rare occurrence for this to happen. The cases first become quiet, then coherent and rational, often losing their hallucinations the first or second day. Cases treated earlier come under control earlier. When pyrexia has ensued, more rigorous treatment must be pursued.

Subsidiary Therapy

When patients are physically fit they are often sent to the hydrotherapy department for hot cabinets and the Scotch douche to complete the treatment.

Vitamins are used sometimes,[22,23] but reliance is placed on reëstablishing the water balance to see the patient through the critical period of his acute alcoholic disorder.

A specific treatment does not exclude other therapeutic measures. For example, iron as well as quinine is indicated in malaria, and rest in bed as well as antitoxin in diphtheria. Mismanagement may lose the case, and certain measures may be harmful. It is not denied that these patients often show dehydration symptoms. But the treatment makes them thirsty and they will usually demand or take as much water as they need. Occasionally isotonic solutions have been given parenterally, usually normal saline. It has been noticed that occasionally the case seemed to hang, and not proceed beyond a certain degree of cure until glucose had been given, when it cleared up almost immediately. On the other hand, dextrose alone, no matter how much is given in 50 per cent or other solution, will not always save the case if the essential treatment is omitted. It has been usual to give these cases magnesium sulfate and a moderate amount of bromides. Once delirium tremens has been recognized as an acute disorder, with a critical phase lasting from a few hours to a few days, one feels less hesitancy in giving paraldehyde to cause sedation, with an occasional dose of barbiturate. And there is also less hesitancy in restraining them physically, as any other delirious case might be, while they quiet down under the therapy. Sleep is very helpful. The vomiting will usually vanish in a day or so on liquid diet even without alkalis.

Lumbar puncture is usually unnecessary[4,7] and too often a harmful procedure, perhaps causing such a turn in the condition of the patient that death ensues later. It appears to cause delayed shock, with pallor and sweating the next day and lowered systolic and pulse pressures. It was recommended as a routine procedure by Piker and Cohn,[3] who at the same time recommended digitalization of every case. The procedure apparently was recommended on a misconception of the disease.

It has been suggested, without clear proof, that the cerebral edema is the cause of the increased cerebrospinal fluid pressure.[24,25] The evidence, however, seems to point the other way, and it appears rather that the increased cerebrospinal fluid pressure is the cause of the cerebral edema.

Thomas[26] showed that alcohol immediately causes a sharp rise in cerebrospinal fluid pressure. In the reaction to alcohol the cerebrospinal fluid pressure "rises to a critical point." Steinebach[27] believed that the essential pathogenicity of alcohol in delirium tremens was related to the increased cerebrospinal fluid pressure. Contradictory statements have been made about the cerebrospinal fluid pressure in acute alcoholism, some authors stating that all cases have an increase while observation showed that it is frequently not increased.[24,7] What probably occurs is that it is increased at the outset of the alcoholic debauch, but that by the time the patient comes under observation it has usually fallen.

The increased hydrostatic pressure of cerebrospinal fluid would naturally exert itself in the direction of increased volume, which tendency would continue as long as the increased pressure persists, if the increased volume is allowed for by decrease of other skull contents. As the edema increases the pressure should be thereby relieved.

The process, however, cannot safely be reversed by the exercise of actual hydrostatic pressures. How could withdrawing of spinal fluid cause a reversal of the mechanics of the situation?

But by the use of osmotic pressures, with the relative lowering in the cerebrospinal fluid by its increase in the blood, the fluid is absorbed safely. Osmotic pressure may be regarded as latent hydrostatic pressure, and it may be measured as actual or manifest hydrostatic pressure.[28] The osmotic pressure of a substance in solution is the same as the gas pressure which would be exerted if the same number of molecules were present in the gaseous state in the same volume. Under Boyle's law there is an inverse ratio between the volume and pressure of a gas. So the tendency to shrinking in volume, with a relatively lowered osmotic pressure, is more readily understood. The decrease in volume takes place by diffusion of solvent, the fluid, through the semi-permeable membranes, the salt being held back appreciably.

But what happens if spinal fluid is withdrawn, without any effort to cause absorption and retard secretion of the fluid? The essential processes lie untouched and undue secretion is encouraged, while a dangerous lowering of the hydrostatic pressure of the spinal fluid has been caused. For the operation to be performed, the patient also may have had to be physically subdued to a considerable degree, which is in itself a very harmful thing.[29]

Finlayson and Karnosh[30] made a curious observation on the procedure, that if the withdrawn fluid was replaced by normal saline, the beneficial effect was increased. This procedure has not come into general use, perhaps because these authors suggested, on the basis of toxic theories of delirium tremens, that toxic fluid was replaced by pure saline, and the effort then was not worth the trouble. But the real explanation of the improvement might lie in the lowered osmotic tension established in the spinal fluid, since normal spinal fluid, and probably even alcoholic spinal fluid, has a higher concentration of sodium chloride than normal saline, and the lowering of the osmotic pressure should have started the absorption back through the choroid plexus, just as raising it in the blood causes this reverse flow.[15]

If this is the explanation, then replacing the withdrawn spinal fluid with distilled water would be more beneficial still. But it is much simpler to raise the osmotic tension of the blood by adding salt. This is more correct also because there is an absolute loss of sodium chloride, as well as a relative diminution, and the patient needs a considerable amount of new electrolyte to replace what he has lost. The effort should be made to lessen the volume of cerebrospinal fluid by physiologic processes and not by crude attack.

It is more rational to give the fluid intravenously than to depend on salt taken orally, when it is given only to make up for the absolute loss, to help retain water and to combat dehydration and acidosis.[6] But the maldistribution of fluid must also be corrected. The best point of application, to correct the maldistribution, is directly into the blood stream, where by the osmotic effect in hypertonic solution some of the misplaced fluid is drawn back into the blood stream and distributed generally.[31]

According to the Munro-Kellie-Burrows hypothesis[32] the volume of cranial contents remains practically the same, so that when the volume of cerebrospinal fluid is diminished by the attraction of the salt in the blood, the volume of blood in the cranium must increase at once.[33,34] At the same time there is an increase in the oxygen utilization.[35] Also helpful toward normal cerebration must be the lessening of the cerebral edema, which must muffle cell nutrition. The rapid effect on the patients' symptoms must be attributed to the above and similar phenomena rather than to any immediate decrease in toxicity of the brain fluids or to the possible supply of vitamins from somatic reserves.

Technic of the Treatment

The technic of the intravenous medication is simple enough. If leakage should occur accidentally at the site of injection for a moment or two, no harmful results accrue. There immediately follows some local swelling due to the attraction of fluid from surrounding parts, and the initial stinging subsides as the fluid accumulates. No sloughing of tissue has occurred. Very little trouble has occurred from venous thrombosis after repeated injections, so that on both these counts there is less trouble than with 50 per cent glucose. For some reason there have been very few reactions such as occur after parenteral isotonic saline or glucose solutions prepared under similar conditions in the hospital, such reaction having occurred in only 2 instances in injections numbering between 5,000 and 6,000. The rate of flow is best controlled by the height of the cylinder rather than by the clamp. Using a 20-gauge needle, 150 c.c. usually takes 10 or 15 minutes. As the circulation time is 25 seconds, thorough mixing with the general blood volume should be effected. The apparatus should be watched throughout the injection since the needle may shift after insertion. This is especially liable to occur if there has been some initial leakage with the consequent swelling and distortion of tissues at the site.

Complications

Cases of alcoholic psychosis are frequently complicated by other conditions. Frequent complications[18,4] are pneumonia, head injury, cerebral hemorrhage, gastric hemorrhage, cirrhosis of the liver perhaps with ascites, cardiovascular failure, and such things as suppuration somewhere. Such cases, of course, should not be denied whatever help is available by the use of hypertonic saline, and such treatment may save the patient.

Cases of profound alcoholism are liable to edema of the lungs, which if untreated may pave the way for pneumonia. But a case of bubbling râles, audible at the bedside, may clear up on an initial injection of 250 c.c. of the saline. The incidence of lobar pneumonia is less under this régime. And if pneumonia does supervene, there has been found no objection to its use, along with the sulfapyridine, serum and whatever else is indicated. Under such treatment there has been a considerable drop in the mortality, most of the cases being saved and a larger proportion than by specific treatment for the pneumonia alone. Many cases of "alcoholic pneumonia" are thus treated in the psychiatric department of Gallinger Municipal Hospital.

Cases of general paralysis are, of course, not immune to the effects of alcohol; rather are they more susceptible, so that an alcoholic psychosis may be superimposed. By the treatment here indicated these cases quiet down, the wild delirium is cleared and the patients become much more coöperative.

Cases with organic heart disease with failure should not have an additional load placed on the heart by increasing the blood volume too much, which of course may occur with the intravenous injection of 5 per cent saline.[31,32,36] Some sodium chloride here might be given orally. Venisection is sometimes advised to lessen the blood volume, but here the patient loses valuable blood cells, plasma and electrolyte in the fluid loss. The double purpose of "bloodless venisection" and of cerebral dehydration may be accomplished, however, by giving hypertonic saline subcutaneously (300 to 500 c.c. of $2\frac{1}{2}$ per cent saline solution with a little novocaine). The intentionally made subcutaneous edema is taken up as the heart is able to carry the load, and in the meantime brain and heart may both tide over the critical period. Other cases may show an acute vasomotor collapse.[3,4] Such cases may show marked somatic dehydration and subcutaneous normal saline here may well precede the intravenous hypertonic saline, especially as at first the veins may be difficult to enter. Caffein, coramine and ergot have been used to advantage, and digitalization has been recommended. Vitamin B_1 may be of definite use in the critical period as well as later.[37]

Cirrhosis of the liver with ascites, with alcoholic psychosis, is sometimes a formidable problem. In these cases the disturbance of sugar metabolism is probably of long duration.

Some cases of cerebral hemorrhage, with and without external trauma, and some cases of skull fracture have also been treated by the method with beneficial results and I am quite in accord with remarks on the matter by Bowman and

Keiser,[6] who, however, used the salt orally. Cases of head injury have been treated with magnesium sulfate orally, and with some success. But here cerebral dehydration is obtained only at the price of general dehydration, while by giving hypertonic saline intravenously and fluids by mouth or subcutaneously, cerebral dehydration and general hydration may be accomplished at the same time.

A case report of head injury without alcoholism may be illuminating. M. B., case no. A-92097, was admitted to Gallinger Municipal Hospital, February 28, 1939, two weeks after an automobile accident. There was a skull fracture, and the patient was admitted to the psychiatric department as being unmanageable in the general hospital from which she was transferred. She had been disturbed since the accident and was violent, quite delirious, incoherent and hallucinated when transferred. As it appeared probable that she was suffering from cerebral edema following the trauma, she was given the hypertonic saline treatment. This had a rapid effect, she quieted down after 3 injections of 100 c.c. each and within a week she became oriented, coherent and lucid.

Psychotic patients entering the municipal psychiatric department come frequently without history and are often unable, especially at first, to supply any. Alcoholism is often suspected, with reason, but sometimes alcoholism cannot at the end be proved. So it happened that some excited cases were given the hypertonic saline treatment. No harm was ever seen to result to a manic or excited precox from the treatment, and sometimes the patient would quiet down. But one should say here that a wildly excited catatonic precox, actively hallucinated and so introverted and negativistic as to require tube-feeding, will sometimes snap out of the condition and become quiet and amenable with a few subcutaneous injections of isotonic saline.

Laboratory Investigations

I wish to thank Dr. H. H. Leffler for nearly 200 examinations made at the Gallinger Municipal Hospital laboratory. Blood chlorides and blood sugar [30, 25, 6, 38] were very frequently found below normal or at the low margin of the normal range. Some blood sugars were very low. Intravenous injections of sodium chloride disturbed the sugar level. Some old-standing alcoholics, recovered from the recent acute hallucinosis but still physically below par, had persistent low blood sugar. Spinal-fluid chloride was also found relatively low. Blood chloride would soon return to former levels after intravenous injections of salt,[39] indicating both the absolute salt deficiency and the justification for giving the injection more than once a day. No damage was seen to blood cells.[31] Some of these findings are in line with previous reports, as indicated by the references.

Some questions have been left unanswered, but the following practical conclusions may be drawn.

Conclusions

1. The mortality rate from acute alcoholism is substantial, but it has improved with the increased interest in these cases, the increased care given them, and with improved methods of treatment. But there has been hitherto some discrepancy in the methods recommended.
2. If cases of acute alcoholism are treated with hypertonic solution of sodium chloride given intravenously, the great majority, if not all, of the uncomplicated cases may be saved.
3. The stated complications do not preclude the use of sodium chloride, which is usually best given intravenously. The incidence of lobar pneumonia is decreased, and with this treatment the chances of the patients with complications are improved.
4. Subsidiary therapy is necessary.
5. Spinal puncture is unnecessary, sometimes harmful, and at times very dangerous.
6. United States Vital Statistics indicates a sizable field for application of the therapy.

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(*Continued on page 331*)

HISTORY OF TOBACCO

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Tobacco is incomparably the most generally used of all narcotics. The natives of Haiti used a tube or reed in smoking and its name, tobacco, was adopted by the Spaniards as the name of the product used.

Columbus sent ashore in Cuba two messengers, one a learned Jew who could speak Chaldean, Hebrew and Arabic and who Columbus was sure could speak with any deputy of the Grand Khan of Cathay (China) whom he would encounter. They met men carrying packages of rolled leaves in the shape of cigars which they smoked, finding that it comforted the limbs, intoxicated them, made them sleepy and also lessened their weariness.[1] When the Spaniards landed in Mexico in 1519, the natives were cultivating tobacco with great care and skill and believed it to cure bronchitis, asthma and rheumatism. Thevat[2] in 1555 found the natives of the Orinoco forests of Venezuela and Brazil making snuff to a high degree of perfection and chewing the leaf. The Tupi Indians inhabiting the Amazon areas used Cohoba which was a narcotic snuff made from a tropical American tree, Piptadenia peregrina, and as probably the two were mixed, the early Spaniards confused this with tobacco.

Sir Francis Drake during his visit to what was probably Drake's Bay, California, June 17–23, 1579, was presented with bags of tobacco.[3] Juan Francisco de la Bodega in the voyage to Trinidad found gardens of tobacco which they used for smoking.[4] The tobacco plant was brought to Europe in 1558 by Francisco Fernandes, who was the agent of Phillip II of Spain to investigate the products of Mexico. In 1568 Jean Nicot, the French ambassador to Portugal, sent seeds of the plant to Queen Catherine de' Medici.[5] Jean Nicot was a French diplomat, a courtier of Henry II and an envoy of Francis II to Lisbon, who wrote a French dictionary, "le Tresor de la langue Francaise 1606." He procured seeds from a Dutchman who brought them from Florida. Nicot's services were rewarded by the name Nicotiana. Although at first no great healing powers were attributed to tobacco, Nicot had observed the rapid healing of an ulcer with its use, so that it was called "Herba santa." While the plant came to Europe through Spain its use for smoking purposes spread to the continent from England. Ralph Lane, the first governor of Virginia, and Sir Francis Drake called Sir Walter Raleigh's attention to the habit. Lane was thought to have been the first English smoker, but Raleigh who "took a pipe of tobacco a little before he went to the scaffold" was responsible for the habit to be rooted among Elizabethan courtiers.[6]

Some fifty species of Nicotiana are known and two, tabacum and rustica, are grown for commercial purposes. The one in greatest use, Nicotiana tabacum, originated in South America. Fourteen species are native to North America.[7] The varieties found in the Lewis and Clark Expedition were of the type Nicotiana quadrivalvis,[8] and this same type was used by the Hidatsa Indians[9] and the Crows.[10] Nicotiana is a genus of plants of the potato family, Solanaceae, so that the tobacco plant is related to the tomato, potato, eggplant, pepper and Jimson weed.

Pipe smoking has been a custom prevailing in America for an unknown period. The wide area over which clay pipes and mound pipes are found indicates the universal prevalence of smoking in the pre-Columbian era. The clay pipes were well moulded and ornamented. The mound pipes were carved from porphyry and other hard stones uniform in type with a fine hole pierced from one end of the platform to the bottom of the bowl. This platform was convex, 3 to 4 inches long and an inch broad with the bowl on the center.[11]

The North American Indians used the tobacco pipe in their superstitious rites and usages. The calumet, peace or medicine pipe was an object of veneration especially used in making treaties of peace. The term "calumet" from the Latin *Calamus*, a reed, was a name given by the French in Canada. The bowl in the East and Southeast was made of white stone and sometimes pierced with several stem holes so that many persons might smoke at once.[12] While the stone pipes seemed to be objects of value, the wooden pipe was common.[13] Different methods of boring out wooden pipes were used. One, according to Dixon, was made from a wood with a porous pith in which the Indians excavated some little distance and then scaled up a grub secured from infested salmon which would follow the core.[14]

In smoking, many Indians sought the effect of acute tobacco poisoning. They took the smoke into the lungs and held it as long as possible.[15] "They set fire to one end and pulling the other end into the mouth they drew their breath up through it. Wherefore, the smoke goes into the mouth, the throat, the head, and they retain it as long as they can for they find a pleasure in it and so much do they fill themselves with this cruel smoke that they lose their reason."[16] They used tobacco most frequently before retiring because of its narcotic effect.[17]

The Klamath Indians cultivated tobacco and no other plant.[18] They scattered the seeds about the camp and weeded them as they found this process to be advantageous. The small patches of tobacco plants around many of their houses were the only evidence of agriculture.[19] The Columbia Indians fertilized the tobacco plots by burning dead wood and setting fire to the brush and logs preparatory to sowing. They chose an open place in the wood which they burned and sowed the seed in the ashes.[20] The plant was cultivated on land from which the brush had been burned away.

Smoking had a semi-religious character,[21] and the pipe was mysterious and endowed with great magic power. Although the Indians had superstitious beliefs about tobacco and used it for various ailments, such notions were not limited to savages, since Europeans began a wider application as shown by numerous articles concerning its use in obesity, pain, retention of urine, lead colic, tuberculosis, strangulated hernia and gout.[22] It was used for asthma and rectal diseases and as a plague preventative during the great epidemic of London.[23]

Among the methods of use were the local application of hot leaves, rubbing the teeth with the juice, wrapping a leaf into a tooth, boiling the leaves and making decoctions, leaves or a syrup, using the ashes or powder as a poultice,[24] making fomentations, rubbing the leaves or the juice into wounds and smoking through the nose. Tobacco enemas and smoke fumes injected into the rectum were other bizarre ways of using this panacea.[25]

Evararto called it "Herba Panacea," and listed six preparations: Tabaco unguentorum, emplastrorum, balsarmorum, einamentorum, ceratorum and apocorum. He advised its use for verruca, clavus, carbuncles, plague, jaundice, dermatitis venenata, rabies, urticaria, scrofula, lentigo (freckles), indolent ulcers, venereal ulcers, bleeding, diarrhea, scabies, asphyxia neonatorum, hemorrhoids, hydrops, sciatica, syncope, colic, dolor crapula (overeating), gastric cramps, mouth ulcers, lung affections, asthma, inveterate cough, dental pains, redness of the face, ozena, caligo (dimness of vision), surditas (deafness), catarrh and cephalalgia. Following such reports cases of accidental poisoning began to appear, and because of the frequent deaths, tobacco came to be used no longer as a medicine.

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(Continued on page 332)

FADS AND FALLACIES IN THE DIAGNOSIS AND TREATMENT OF HYPERTENSION

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Both impressing and depressing are the statements and queries of many patients and of some physicians in regard to hypertension. "Dr. Blank treated my father for high blood pressure and brought it down to normal in two months" is an example of a statement often made. To tell a patient a falsehood of this magnitude at times may be justified for psychologic reasons, but to so hoodwink the close relative is little short of quackery, because hypertension, and particularly the main form, essential hypertension, in more than 99 per cent of cases is a chronic and progressive disease. Even worse, however, is a story a patient with moderately high blood pressure recounted with dread in her voice: "Dr. Blank took my blood pressure and then said, 'My God, Madam, it's a wonder you're still alive!' " Naturally this surprised physician not only sent the blood pressure higher, but produced a serious anxiety neurosis.

A fallacy at times still relayed to the patient is the comment that it is not the blood pressure that is bad but what causes it. This may be likened to stating that it is not the bullet but the gun that caused the damage, for it is the blood pressure which in time directly produces invalidism and eventually death. Another misconception of no great importance is that one's blood pressure should be the age plus 100. Hypertension rarely has anything to do with the aging process or arteriosclerosis, a person of 75 years often having a blood pressure similar to that of a well individual of 25.

One encounters many instances of the wholesale extraction of teeth for the "cure" of hypertension, when so far as is known focal infection is not concerned in the etiology. It may be advisable to limit the amount of smoking in cases of hypertension, but not with the idea of greatly alleviating it, since it is only rarely that sensitivity to smoking raises blood pressure.

Diagnosis

About 90 per cent or more of the cases of hypertension still must be placed in the category of essential hypertension, in spite of all the recent hullabaloo concerning renal infection or sclerosis as a cause. Goldblatt's[1] now famous experiment of producing hypertension by clamping the renal artery is interesting and probably important, but many have become over-enthusiastic about it. There is no doubt that a pressor substance, renin, is produced in the kidney deprived of its blood supply, but there is no proof that essential hypertension has anything to do with the kidneys. One thing that has been emphasized to advantage, however, is that a careful effort must be made to rule out renal infection and especially unilateral renal sclerosis, since in rare instances treatment of the renal disease, such as removal of a sclerotic kidney, may cure the hypertension. As a rule, in suspected cases intravenous pyelography and carefully done culture of the urine are sufficient to establish the presence or absence of renal infection or sclerosis.

Diffuse glomerular nephritis, Bright's disease, often causes hypertension, although mainly in the chronic form; but even here the hypertension is often mild and not an index of the degree of renal damage. Usually the clinical picture is definitely that of renal disease, whereas in essential hypertension it is definitely that of high blood pressure.

A less common renal cause of hypertension is congenital polycystic kidneys, the hypertension progressing with the renal insufficiency.

Uncommon causes of chronic hypertension are coarctation of the aorta, large arteriovenous fistula, hyperthyroidism, aortic regurgitation, complete heart block, Cushing's syndrome, pheochromocytoma and paraganglioma, and benign systolic hypertension of the aged. If one but keeps these possibilities in mind when a patient with hypertension comes along he will easily spot them. For instance, in a young person with hypertension absence of pulsations in the abdominal aorta and femoral arteries means coarctation of the aorta. A large arteriovenous fistula is almost always traumatic in origin and present in an extremity, so that the history plus the presence of enlarged veins in the limb and a thrill and bruit are telltale. The hypertension often seen with hyperthyroidism is usually systolic and very mild, whereas the other symptoms of hyperthyroidism are so much more prominent. Aortic regurgitation can be diagnosed even by the novice; here the systolic pressure is elevated, the diastolic lowered. Hypertension is purely compensatory in cases of complete heart block, but not always present, and the constant pulse rate of 35 to 40 is pathognomonic. The diagnosis of pituitary basophilism (Cushing's syndrome) is often fraught with uncertainty; amenorrhea, hirsutism of the male type, and a peculiar type of obesity localized in the face, neck and trunk with broad purplish striations are prominent features. Hypermedullary adrenalism resulting from hyperfunctioning medullary tumors or allied tumors of the chromophil tissue (pheochromocytomata, paragangliomata) cause paroxysmal vasomotor attacks, tachycardia, nausea and vomiting, as well as hypertension; between paroxysms the blood pressure is usually, but not always, normal. Systolic hypertension of the aged is not common and is of no great importance.

Toxemias of pregnancy cause hypertension subacutely, and a sudden increase in intracranial pressure, usually traumatic, raises the blood pressure acutely.

Great variation has existed in the technic of determining the level of the blood pressure. Because of this the American Heart Association two years ago published criteria[2] for "taking" the blood pressure. Because of the importance of technic, it is perhaps not amiss to quote from the report of the Heart Association.

"1. Blood Pressure Equipment.—The blood pressure equipment to be used, whether mercurial or aneroid, should be in good condition and calibrated at yearly intervals—more often if defects are suspected. (Mercurial preferred—British Committee.)

"2. The Patient.—The patient should be comfortably seated (or lying—British Committee), with the arms slightly flexed and the whole forearm supported at heart level on a smooth surface. If readings are taken in any other position, a notation of that fact should be made. The patient should be allowed time to recover from any recent exercise or excitement. There should be no constriction of the arm by clothes, etc.

"3. Position and Method of Application of the Cuff. —A standard-sized cuff containing a rubber bag 12 to 13 cm. in width should be used. A completely deflated cuff should be applied snugly and evenly around the arm with the lower edge about 1 inch above the antecubital space and with the rubber bag applied over the inner aspect of the arm. The cuff should be of such a type and applied in such a manner that inflation causes neither bulging nor displacement.

"4. Significance of Palpatory and Auscultatory Levels.—In all cases palpation should be used as a check on auscultatory readings. The pressure in the cuff should be quickly increased in steps of 10 mm. Hg until the radial pulse disappears, and then allowed to fall rapidly. If the radial pulse returns at a higher level than that at which the first sound is heard, the palpatory reading should be accepted as the systolic pressure; otherwise the auscultatory reading should be accepted.

"5. Position and Method of Application of Stethoscope.—The stethoscope should be placed over the previously palpated brachial artery in the antecubital space, not in contact with the cuff. No opening should exist between the lip of the stethoscope and the skin; this should be accomplished with the minimum pressure possible. The hand may be pronated or supinated, depending on which position yields the clearest brachial pulse sounds.

"6. Determination of the Systolic Pressure.—The cuff should be rapidly inflated to a pressure about 30 mm. above the level at which the radial pulse can be palpated. The cuff should then be deflated at a rate of 2 to 3 mm. Hg per second. The level at which the first sound regularly appears should be considered the systolic pressure, unless, as pointed out above, the palpatory level is higher, in which event the palpatory level should be accepted. This should be noted.

"7. Determination of the Diastolic Pressure and the Pulse Pressure.—With continued deflation of the cuff, the point at which the sounds suddenly become dull and muffled should be known as the diastolic pressure. If there is a difference between that point and the level at which the sounds completely disappear, the American Committee recommends that the latter reading should be regarded also as the diastolic pressure. This should then be recorded in the following form: RT* (or LT**) 140/80–70, or 140/70–0. If these two levels are identical the blood pressure should be recorded as follows: 140/70–70. The cuff should be completely deflated before any further determinations are made.

"The British Committee believes that except in aortic regurgitation it is nearly always possible to decide the point at which the change comes, and that this is the only reading which should be recorded.

Explanatory Comments

"In addition to the above specific recommendations, the Committees believe that certain other factors should be taken into consideration by the physician who makes blood pressure determinations.

"The relative merits of various types of sphygmomanometers have been the subject of numerous reports. In the opinion of the joint Committees, mercurial and aneroid types of apparatus are capable of correct readings if they are in good condition, and both types of equipment may produce inaccurate findings if not in good condition. This factor is often overlooked in the case of the mercury manometer, which should be checked at intervals as to the following points:

1. The level of the mercury at rest should be exactly at the zero mark. If some of the mercury has leaked out this will not be the case. The missing mercury should be replaced.
2. If the small air vent at the top of the glass tubing becomes clogged, a definite lag may be produced; the mercury column may not register the pressure in the bag, and the readings will therefore be incorrect.
3. The apparatus must be on a level surface, since tilting of the manometer will result in incorrect readings. It should also be level with the observer's eyes.

"A yearly calibration of the aneroid type of instrument against a U-tube standard is recommended. This is particularly advisable for the older instruments, in which a sharp blow or fall may cause inaccuracies due to resultant changes in the aneroid diaphragm. The needle should stand at zero when the apparatus is completely deflated and move immediately when the inflation begins. Manometers which have a stop pin at zero, or those which have a rotatable dial, permitting the user to set the zero mark anywhere, are not recommended, since a satisfactory check with instruments of this type is impossible.

"In both types of equipment the valves of the instrument, including those of the rubber bulb, should be competent and function smoothly. The entire system, including the "pressure" rubber tubing and rubber bag, must be free from leakage and must be kept in good condition. It is recommended that the instrument to be used be checked at yearly intervals against a machine known to be in perfect condition. More frequent checks should be made if the accuracy of the instrument is in doubt. The rubber cuffs should be 12 to 13 cm. wide and 23 cm. long. The cloth covering should be of inextensible material of such a nature that even pressure is exerted throughout the width of the cuff; it should extend as a band 15 cm. wide for 60 cm. beyond the edge of the rubber cuff, and then taper gradually for an additional 30 cm. New types of cuff, using a "zipper" mechanism or hooks on a rib extending the width of the cuff, appeared to be more satisfactory than the long, tapering cuff end. If bulging occurs above and below the band the reading may not be accurate.

"A special cuff should be used to measure blood pressure in the leg. The rubber bag should be 15 cm. wide, and its covering 17 cm. wide and 30 cm. longer than in the case of the armlet (total 120 cm.). For children, cuffs of the following widths have been suggested: under eight years, less than 9 cm.; under four years, less than 6 cm.; newborn babies, less than 2½ cm. The limited work done in this field does not warrant a definite recommendation at this time.

"The American Committee selected the sitting position as the preferable one because of the fact that it simplifies the taking of large numbers of blood pressure readings. It is true that many patients are bedridden, but in most instances they may be propped up into a sitting position without causing more than transitory disturbances in the circulation; and when this is impossible it is suggested that a notation be made as to the position in which the blood pressure is taken. The British Committee did not think that there was any significant difference between the sitting and lying positions. For blood pressure readings in the thighs, the stethoscope bell should be placed over the popliteal artery with the patient prone.

"It is suggested that on the first examination of the patient the blood pressure be taken in both arms, since the two may not be the same. If the patient is followed for a period of time this procedure might wisely be repeated at stated intervals of every few months, and at other times if indicated by developments. In the presence of unexplained high pressure in the brachial arteries it is suggested that the blood pressure in the legs be taken also. By this procedure conditions such as coarctation of the aorta may be detected."

Years ago Hines and Brown[3,4] developed their cold-pressor test. This consisted in establishing a basal pressure by having the patient rest quietly in dorsal decubitus for a half-hour and determining the blood pressure before, during, and immediately after immersion of a hand in ice-cold water (4°C.) for one minute. An elevation of 20 mm. or more systolic and 15 mm. or more diastolic is thought to indicate the existence or tendency to essential hypertension. Elevation of the diastolic pressure is more important than the systolic. This phenomenon is much more common in members of families in which hypertension exists in one or more individuals and may be used to some extent in preventive or at least palliative treatment before hypertension has actually appeared.[5] This sharp response to the cold stimulus is said not to exist in cases of renal hypertension, so that its occurrence is therefore of significance only for essential hypertension.[6] However, the test is not necessarily positive in all cases of essential hypertension.

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* RT—right arm.

** LT—left arm.

It was once thought that the transitory elevations of blood pressure noted when the physician first "takes" the pressure and which then subside were of no significance except as indicating a state of nervous tension. Recently, however, Hines[7] has shown that individuals showing this initial hyper-reaction are prone to develop essential hypertension years later. Consequently they should be treated as potential hypertensives.

There are three main stages in the life history of essential hypertension—the fluctuating, the fixed, and the decompensated, the last being that in which one of the important complications or sequelae has developed, such as congestive heart failure. To establish whether the fixed stage has been reached the patient is put to bed and given mild sedatives; if the fixed stage has not set in the blood pressure will gradually fall to normal within a few days. A quicker method is to "take" the blood pressure before and during the period of action of sodium amytal, 3 grains every hour for three doses being given orally.

TREATMENT

Once the diagnosis of essential hypertension is made the astute physician proclaims somewhat as follows: "Mr. Man, your blood pressure is somewhat elevated. If you act and think after a certain fashion this condition will not bother you, at least for many years. I don't even want you to know what your blood pressure is. Let me worry about that, and don't ask me to tell you what it is." The physician then proceeds to establish a régime of moderate living, as free of stress and strain as possible; often it is wise to put in writing the time of retiring, certain daily rest periods, etc. For a man to assume a new philosophy of life is not easy, but if the physician keeps driving home his lesson of calmness of thought and tranquillity of action, his efforts may finally succeed. When rechecking the blood pressure, the medical adviser may merely state, "not bad," or "better," or "could be a lot worse." The use of a mild sedative is often advisable. The old-fashioned idea of greatly restricting the consumption of meat is undoubtedly erroneous, and its enforcement may cause considerable unhappiness. Moderation in eating is the only rule of diet for cases of uncomplicated hypertension.

There are still physicians who prescribe the nitrites for patients with hypertention. The only indication for their use is an attack of angina pectoris. A patient now under observation was given $\frac{1}{200}$ grain of nitroglycerin twice daily for years. In treating hypertension we are trying to relieve the patient of all unnecessary burdens, not adding a ritual of useless medication.

Sulfocyanate therapy has been revived in late years, and Barker[8] of Chicago has established it on a scientific basis. However, its beneficial effects are limited and it is doubtful whether it will ever be used extensively.

Various splanchnectomies and sympathectomies are being employed in some clinics in selected cases, but with these again the advantages are limited.

Many other fads exist, but although we are probably on the threshold of some great discovery in connection with essential hypertension, at the present writing psychotherapy is the only important therapeutic modality.

One other problem may be discussed in conclusion, that of the proper time to digitalize a patient with hypertension. It seems logical to do this at the earliest indication of the presence of congestive heart failure, namely, when undue dyspnea on exertion develops, whether there are basal pulmonary râles or not. Once the patient has been digitalized he probably should be kept on a maintenance dose of digitalis indefinitely.

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VENOUS LIGATION IN THE TREATMENT OF SUPERFICIAL THROMBOPHLEBITIS

REPORT OF A CASE

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The radical treatment of thrombophlebitis, i.e., ligation and division of a vein proximal to the area of involvement, is not new. Lee[1] in 1865 was the first to ligate a vein proximal to an area of thrombophlebitis with resultant cure. Since that time many men have reported the successful operative treatment of both suppurative and nonsuppurative thrombophlebitis in various locations, including the femoral and saphenous veins; the median, basilic and cephalic veins; the pelvic veins for puerperal sepsis; the superior mesenteric vein for pylephlebitis; and the jugular veins in cases of middle-ear and mastoid infections and others.

Bancroft[2] in 1937 reported a very interesting case of ligation of the external iliac vein for thrombophlebitis involving the deep veins of the lower extremity and extending up into the external iliac. His patient had been in bed, extremely ill for about ten months. Relief was very striking, the pain in the thigh disappearing on the third postoperative day. Pathologic examination of a section of the vein removed at operation showed numerous cocci and an occasional bacillus in the lymphatics of the adventitia and in many sections of the vein. He felt that this substantiated the statement of John Homans[3] of Boston, who believes that the benefit derived from ligation is very largely due to the interruption of the lymphatic chain in the adventitia rather than the ligation of the vein itself.

It is not the purpose of this communication to enter into a discussion of the relative merits of radical versus conservative treatment of this serious and often disabling condition. I believe, however, that there is one major factor in considering a choice of method and that is whether the deep or superficial system of veins is involved. In the former, conservative treatment is undoubtedly to be considered first, with operative intervention reserved for a relatively small group of cases, the indications for which will not be dealt with in this paper. In the latter, the more radical operative treatment is the method of choice and should be employed almost routinely.

Nobl[4] found that 0.5 per cent of fatal pulmonary emboli arise in superficial veins. While this is a relatively small percentage it can and should be entirely eliminated. Recently Barrow[5] reported a case illustrative of the importance of a prophylactic surgical procedure. One reason for not ligating the involved saphenous vein was the rapidity with which the symptoms subsided on conservative treatment. On the fourteenth day in bed, while exerting herself to get on a bed pan, this patient experienced a sudden pain under the sternum followed by profuse sweating, dyspnea, cyanosis, and death within a very few minutes. Autopsy revealed that pulmonary embolism had occurred.

Reduction in morbidity is, perhaps, more important. Thrombophlebitis of the superficial veins, while not requiring as long a period of rest as in the case of the deep veins, means a loss of time of from two to four weeks. Compared with this, in the absence of other contraindications, the patient may be ambulatory immediately following the ligation, and postoperative or postpartum patients who are still confined to bed may move about the bed at liberty and, in fact, are encouraged to do so. Furthermore, their period of bed rest is not lengthened beyond the normal time needed for their original illness, and finally relief of symptoms is almost immediate.

Edwards[6] has shown that in the case of the saphenous vein destruction of the venous valves is an inevitable sequela to the thrombophlebitis. The affected vein, if not already varicosed, will become so, so that ligation will eventually be necessary, the technic of which should follow the accepted surgical methods of treatment for varicosities of the group of veins so affected.[7] Wound infection in patients thus treated has not been reported in the literature.

REPORT OF CASE

Mrs. I. A., a white woman, aged 32 years, was admitted to the obstetrical service of Providence Hospital on July 17, 1940 in active labor and was delivered normally within two hours of her admission. The family history and past history were negative. This was her third pregnancy, all ending at term with normal deliveries. She received her prenatal care for the last pregnancy at the Clinic of Columbia Hospital. There was some slight edema of both ankles during the third trimester but no toxic symptoms. When in about her seventh month she presented herself to me in the Varicose Vein Clinic at Providence Hospital where it was found she had moderate varicosities of the left great saphenous vein in the lower part of the thigh and inner aspect of the knee and calf. The deep circulation was normal, but the sapheno-femoral valve incompetent as shown by the comparative tourniquet test. Because of her pregnancy she was advised to wear an ace bandage and report to the clinic after her delivery.

Physical examination was essentially negative. The blood pressure was 122/80; urinalysis was negative, and the blood counts were within normal limits. There was grade I edema of both feet and ankles and the varicosities as previously described on the left leg. On July 18, 1940, about 24 hours after delivery, she complained of a rather severe pain on the inside of the left knee. There was no elevation of temperature or pulse rate. A diagnosis of simple thrombophlebitis of the saphenous vein was made and the usual conservative treatment instituted.

I was asked to see the patient three days later, on July 21, 1940. The temperature and pulse rate still remained normal. On the inner aspect of the left knee there was a hard, tortuous, extremely tender cordlike mass, extending from about 6 cm. proximal to 8 or 10 cm. distal to the inner condyle of the femur. There was some local swelling and a brawny discoloration to the skin. There was no swelling of the leg distal to the knee. It was felt that this was a case of simple thrombophlebitis of the varicosed great saphenous vein with complete patency of the deep circulation. As a prophylactic measure and to prevent a long stay in the hospital, high ligation of the saphenous vein was advised and carried out on July 22, 1940 under local infiltration anesthesia. Following operation the patient was allowed to move about the bed at liberty, and within 24 hours she was free of pain. Her recovery from this time was uneventful. She was out of bed on the ninth day and left the hospital on the tenth day post partum.

CONCLUSION

Ligation of a superficial vein proximal to an area of superficial thrombosis is believed to be the treatment of choice in these cases. Danger of death from pulmonary embolism is removed, morbidity is eliminated, and symptomatic relief is almost immediate.

Hollingsworth Clinic.

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STAPHYLOCOCCAL SEPTICEMIA TREATED WITH STAPHYLOCOCCAL ANTITOXIN*

REPORT OF A CASE

W. WARREN SAGER, M.D., F.A.C.S.
Associate Professor of Surgery, George Washington University School of Medicine
OSCAR B. HUNTER, M.D., F.A.C.P., AND GEORGE TOLSTOI, M.D.
Washington

This case is of interest because of the method of treatment, the reaction of the metastatic lesions, and the general reaction of the patient to the treatment.

The severity of this type of septicemia is evidenced by the mortality rates in numerous published series of case reports. MacNeal and Frisbee[1] in a hundred cases treated with bacteriophage had a mortality of 75 per cent. Mendell in a series of 35 cases reported a mortality of 83 per cent. Stookey and Scarpellino[2] in a review of 117 cases found the mortality to be 91.4 per cent. Rosenow and Brown[3] reporting the cases of septicemia treated at the Mayo Clinic for the period 1934 through 1936 inclusive found a mortality of 66 per cent for staphylococcal septicemia. This was less than that for streptococcal septicemia, which is interesting since it is the only series in which I found this to be true and it would not be found true at the present time due to the use of sulfanilamide in streptococcal infections.

The ratio of streptococcal septicemia to staphylococcal septicemia in the series reported by Mendell[4] is a ratio of 2.3 to 1, which compares closely with Rosenow and Brown's ratio of 3 to 2.

The disease is more prevalent in males than in females. According to Mendell's figures the ratio is about 2 males to 1 female, and according to this same author there is little difference in the incidence in various age groups, the disease being slightly higher in the early age groups because of the larger number of cases of osteomyelitis.

The age of the patient and the presence of other disease processes influence the mortality rate. Rosenow and Brown gave the death rate in their series as 50 per cent for patients less than 25 years old, 43 per cent for those between 25 and 50 years old, and 93 per cent for patients over 50 years old. Stookey and Scarpellino found in a series of 28 infants less than 18 months of age a death rate of 78 per cent and in 102 patients over 18 months of age a mortality of 96 per cent.

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* Read before the Society, May 15, 1940.

The treatment of this infection has been very unsatisfactory, and it is for this reason that this case report is submitted calling attention to the use of staphylococcal antitoxin. Stookey and Scarpellino recently reported 17 cases of staphylococcal septicemia treated with antitoxin with 9 deaths and 8 recoveries, a mortality of 53 per cent. This was probably, according to Rigdon, the largest series treated in this country prior to February, 1939. A fairly large series has been accumulated by one of us (O. B. H.) with an even lower mortality rate. One of the very satisfactory aspects in the use of antitoxin is the lack of any contraindication to the use of other forms of therapy. Transfusions may be given as often as necessary, and any chemical may be used that is thought to be of value.

Report of Case

A man aged 25 years was admitted to George Washington University Hospital, January 22, 1939 with a staphylococcal septicemia and was discharged on May 21, 1939. Previous to admission I had treated the patient for a staphylococcal cellulitis of the dorsum of the right hand and forearm and had incised it, obtaining thick creamy pus. On the day of admission the patient had physical signs of pneumonia with a temperature of 105°F. and a pulse rate of 130. The respiratory rate was 30 and the patient was expectorating bloody sputum. X-ray examination of the chest revealed a bronchopneumonia. The leukocyte count was 21,000, with 23 per cent band forms and 66 per cent segmented forms.

The general outline of the treatment started was the use of transfusions, many from immunized donors, the use of sufficient staphylococcal antitoxin to neutralize so far as possible the toxins circulating in the blood stream, and the treatment of unusual symptoms as they arose. Repeated blood cultures were taken with the Staphylococcus aureus haemolyticus appearing each time.

Twenty days after admission to the hospital there was definite roentgen evidence of several lung abscesses. These areas persisted until March 31. Clinically it did not seem that they drained through the bronchi, but rather that they resolved as a result of the patient's immunity. On February 7 and 8, when the patient's general condition was worse than at any time during his illness, another organism belonging to the para colon group was discovered in the blood stream. This persisted for weeks and was found after the staphylococcus had disappeared from the blood stream. On February 22 and 23 the patient began bleeding from the bowel and the urinary tract. A platelet count at this time was 60,060. The use of transfusions and liver extract corrected this feature before serious harm was done. At this time the patient was also complaining of pain in the region of the spleen which was suggestive of an abscess in this organ.

Previous to April 8 definite clinical and X-ray evidence of an osteomyelitis of the fourth and fifth cervical vertebrae was found, and at the suggestion of Dr. Custis Lee Hall the neck was immobilized and traction applied. The symptoms at this time were weakness and partial loss of sensation in the arms. On April 8, however, a partial paralysis from the neck down occurred suddenly and seemed to be developing rapidly into a total paralysis. Dr. John Shugrue after careful examination performed a laminectomy which relieved the pressure on the spinal cord, and ultimately the patient was completely relieved of all his neurologic symptoms. At the time of operation Dr. Shugrue was unable to find any evidence of pus formation, the tissue found resembling that of a granulomatous lesion.

The patient was critically ill throughout a large part of his hospital stay. Since discharge, however, he has been able to return to work and is enjoying the best of health.

During the course of the illness, 2,340,000 units of staphylococcal antitoxin was given. Forty-seven transfusions were also used. Seventeen doses of staphylococcal toxoid were given during the latter part of the illness.

It is interesting that this patient with multiple metastatic lesions did not develop frank abscesses, in the sense that none drained or required drainage. The wound made in the laminectomy healed without evidence of infection. This Dr. Hunter has found true of other cases treated with staphylococcal antitoxin.

Discussion

The newer knowledge of the physiology of the staphylococcus indicates the rationality for the employment of the measures advocated in this article. It is hoped that this report will serve as a stimulus for the employment of the antitoxin and hematotherapy in these cases, at least until more potent measures are found.

Staphylococci (aureus) are spherical cells averaging 0.8 microns in diameter. Examination of smears from cultures or pus reveal them to be arranged individually, in pairs, in short chains, or in grape-like clusters. They are Gram-positive, nonmotile, nonflagellated, nonencapsulated and nonsporeforming. Growth is abundant and luxurious upon the usual laboratory media at a temperature of 35°C.

Various toxins are elaborated by staphylococci.

A. *Endotoxins.* Abscess formation and death occur when the dead bodies of staphylococci are injected into rabbits. The killed organisms exert a strong positive chemotaxis for leukocytes. Certain staphylococci of the aureus type produce a substance variously known as plasmacoagulase, staphylocoagulase and staphylokinase which will coagulate citrated or oxalated rabbit plasma. It has been suggested that this substance is responsible for the thrombi and emboli common in staphylococcemia.

B. *Exotoxins.* Filtrable toxins have been prepared from the cultures of many strains of Staphylococcus aureus and albus. Five distinct toxins or one antigenic toxin with five distinct actions have been described. Injection of this material into animals leads to the production of antitoxins. The toxic filtrate produces the following actions:

1. Hemolysis of the red cells;
2. Destruction of leukocytes;
3. Necrosis of the skin;
4. Fatal toxemia when injected intravenously; and
5. Gastroenteric symptoms when swallowed.

1. *Hemolysin.* It was discovered in 1900 that the filtrate of staphylococci dissolved the erythrocytes in blood agar. Hemolysis is produced by the aureus type and to a lesser extent by the albus type.

2. *Leukocidin.* Cultures of Staphylococcus aureus grown in mixtures of bouillon and blood serum contain a substance known as "leukocidin." This will cause death and partial solution of leukocytes.

3. *Necrotizing toxin.* It has been demonstrated that filtrates of Staphylococcus aureus grown on modified Walbaum's media produce an extremely labile exotoxin which causes necrosis when injected into the skin of rabbits.

4. *Lethal toxin.* The intravenous injection of filtrates of broth cultures of certain strains of Staphylococcus aureus will quickly kill rabbits. In the Bundaberg disaster in Australia in 1928, 12 of 21 children died within 24 hours after the subcutaneous injection of a diphtheria toxin-antitoxin preparation contaminated by Staphylococcus aureus.

5. *Enterotoxin.* Outbreaks of acute gastroenteritis characterized by the usual symptoms have been produced by the filtrate of the Staphylococcus.

A so-called "spreading factor" has been described which is prepared from extracts of staphylococci. It appears to increase the permeability of the skin to invasion by staphylococci and other organisms. Panton and Valentine[5] conclude from their experiments that the result of staphylococcal infection of the skin is to lower the minimal infective dose of the organisms and that this increased sensitivity may result in further skin lesions in spite of the concomitant production of antibacterial substance by the body.

The treatment of staphylococcal septicemia embraces those measures which will combat toxemia, prevent metastatic, necrotizing lesions, sterilize the blood stream, preserve the erythrocyte level and eradicate the initial lesion. The most effective treatment in our experience has been as follows:

1. Attention to the original focus and all secondary foci of infection if possible;
2. Staphylococcal antitoxin;
3. Transfusions and immune transfusions;
4. Supportive therapy;
5. Specific bacteriophage of proven lytic action.

Toxoid theoretically at least serves no useful purpose during the acute stage. Sulfanilamide and sulfapyridine have been advocated. The mode of action appears quite obscure and per-

(*Continued on page 332*)

1940 ANNUAL SCIENTIFIC ASSEMBLY

of

THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

Mayflower Hotel

October 15, 16, 17

Your Committee Presents - - -

The Annual Scientific Assembly of the Medical Society of the District of Columbia has become the outstanding scientific event of the Nation's Capital. In keeping with this standard your Committee presents the 1940 Assembly feeling certain that it will prove attractive to general practitioners as well as specialists. The subject of the postgraduate course this year is Cardiovascular-renal Diseases. Problems in this field are constantly before every physician. An opportunity to review and acquire the latest knowledge of these diseases is afforded those who attend. In keeping with the country's preparedness program, here is an opportunity for physicians to prepare themselves more adequately in their own field of endeavor.

In addition to the scientific program, care and thought have been given to other features of the Assembly. There will be many more scientific exhibits than in previous years, space allotted for this purpose having been doubled. In fact, there was so much material available it was difficult to make a selection. Time devoted by attending physicians to these exhibits will therefore be well spent.

The Society luncheon and the luncheons given by the Georgetown University School of Medicine and the George Washington University School of Medicine alumni groups will not only afford physicians an opportunity to fraternize but to hear nationally known speakers on timely subjects. No one will want to miss the public meeting and the annual banquet. A new feature has been added to the Assembly this year which I am sure will meet with approval—the Doctors' Hobby Show.

I ask every member of the Society to note the dates of the Assembly on their calendar pads now and plan to attend every session. Your Committee on Arrangements feels that it has discharged its duties well and does not hesitate to assure every physician full value for his attendance.

John A. Reed

General Chairman
Committee on Arrangements

SYNOPSIS OF PROGRAM

(All Meetings at the Mayflower Hotel)

TUESDAY, OCTOBER 15, 1940

9:00 A.M.–11:40 A.M.: Scientific Program

12:00 Noon–1:30 P.M.: Society Luncheon

Speaker: Major General James C. Magee, Surgeon General, U. S. Army

2:00 P.M.–4:30 P.M.: Scientific Program

9:00 P.M.: Doctors' Hobby Show—open to physicians, their families and friends

WEDNESDAY, OCTOBER 16, 1940

9:00 A.M.–11:40 A.M.: Scientific Program

10:00 A.M.: Woman's Auxiliary sight-seeing trip, starting from the Medical Society Building, 1718 M Street, N.W.

12:00 Noon–1:30 P.M.: Georgetown University School of Medicine Alumni Luncheon

Speaker: Hon. Edward M. Curran, United States Attorney for the District of Columbia

1:00 P.M.: Woman's Auxiliary Luncheon

2:00 P.M.–4:30 P.M.: Scientific Program

6:00 P.M.: Women's Medical Society Dinner

8:00 P.M.: Public Meeting

Speaker: (To be announced.)

THURSDAY, OCTOBER 17, 1940

9:00 A.M.–11:40 A.M.: Scientific Program

12:00 Noon–1:30 P.M.: George Washington University School of Medicine Alumni Luncheon

Speaker: (To be announced.)

2:00 P.M.–4:30 P.M.: Scientific Program

7:30 P.M.: Annual Banquet, Grand Ballroom. Entertainment.

SPECIAL EVENTS

Aside from the scientific program, there are many features of the 1940 ANNUAL SCIENTIFIC ASSEMBLY which will prove attractive to physicians and their families.

On Tuesday, October 15, at noon, there will be a luncheon in the Grand Ballroom for members of the Medical Society and visiting physicians. Major General James C. Magee, Surgeon General of the United States Army, will be the speaker. Tickets will be provided those who register not later than 11:00 a.m. on that day.

The Doctors' Hobby Show, a new feature of the ASSEMBLY, will be open from nine until five o'clock each day. There will be a special showing on Tuesday evening, October 15, beginning at eight o'clock, for physicians, their families and friends.

Another luncheon will be given on Wednesday, October 16, at noon, by the Georgetown Medical Alumni Club. The speaker on this occasion will be the Honorable Edward M. Curran, United States Attorney for the District of Columbia. Tickets for this luncheon ($1.50) can be obtained from Dr. Harry F. Davies, 1835 Eye Street, N.W., Washington, D. C.

The Women's Medical Society will hold its annual dinner at the Mayflower Hotel in the Sapphire Room on Wednesday, October 16, at 6:30 p.m. Women medical registrants will be invited guests and those desiring to make reservations should get in touch with Dr. Margaret Nicholson, 1801 Eye Street, N.W., Washington, D. C.

Of special interest this year will be the public meeting. A nationally known speaker will be obtained for this occasion. His name will be announced later.

On Thursday, October 17, at noon, the George Washington University Medical Society will give a luncheon. The choice of speaker has not yet been announced. Tickets ($1.25) for this luncheon can be obtained from Dr. Arnold McNitt, 1835 Eye Street, N.W., Washington, D. C.

The ASSEMBLY will close with the annual banquet, which is to be held in the Grand Ballroom at the Mayflower Hotel. Excellent entertainment is being provided under the direction of Dr. Robert H. Harmon.

POSTGRADUATE COURSE IN CARDIOVASCULAR-RENAL DISEASES

All Sessions in Grand Ballroom, Mayflower Hotel

TUESDAY, OCTOBER 15—MORNING SESSION

9:00 ROENTGEN DIAGNOSIS IN CARDIOVASCULAR DISEASE

The clinical value of cardiac roentgenology will be critically analyzed, with emphasis on an evaluation of each of the following: heart size; compensation-decompensation; calcification of the heart. (Slides)

Richard Schatzki, M.D. (Boston, Mass.)

Instructor in Roentgenology, Harvard Medical School; Associate Roentgenologist, Massachusetts General Hospital

9:30 SOME INTERESTING ELECTROCARDIOGRAPHIC INTERPRETATIONS

No abstract submitted. (Slides)

Raymond Hussey, M.D., F.A.C.P. (Baltimore, Md.)

Associate Professor of Medicine, University of Maryland

10:00 RECESS

10:20 CONGENITAL MALFORMATIONS OF THE HEART

The essential features of the three main groups of congenital malformations of the heart will be presented and common examples of each group cited. The two most important factors in determining the prognosis in cases of congenital heart disease will be discussed; that is, the size of the heart and the cause and intensity of the cyanosis. The presentation will close with a discussion of the complications which may be associated with congenital lesions of the heart. (Slides)

Helen B. Taussig, M.D. (Baltimore, Md.)

Associate in Pediatrics, Johns Hopkins University

10:50 ACUTE RHEUMATIC CARDITIS

Description of the presumptive and actual evidences of active heart disease in rheumatic fever. Variation in the clinical picture dependent upon whether the endocardium, myocardium, or pericardium seems to be the location of the predominant pathological changes. Delineation of the unusual features of congestive failure in children with carditis. Reference to therapy and prognosis.

T. Duckett Jones, M.D. (Boston, Mass.)

Associate in Medicine, Harvard Medical School; Physician, Massachusetts General Hospital

11:20 MANAGEMENT OF THE CHILD WITH INACTIVE RHEUMATIC HEART DISEASE

Inactivity of the rheumatic infection is determined by the pulse rate, the temperature, the leukocyte count, and the erythrocyte sedimentation rate. Whether a child with inactive rheumatic heart disease may resume his normal activities will depend upon the functional capacity of his heart, as shown by the degree of cardiac enlargement and his response to exercise. Recent studies have shown that the majority

Harry H. Donnally, M.D., F.A.A.P. (Washington, D. C.)

Professor of Pediatrics, George Washington University School of Medicine of these children may lead normally active lives. In each case it must be determined whether the patient should be kept under observation at home, in a convalescent heart hospital, or in a foster home. Effort should be centered upon preventing a reactivation of the rheumatic infection.

11:40 RECESS

TUESDAY, OCTOBER 15—AFTERNOON SESSION

2:00 DIFFERENTIAL DIAGNOSIS OF CONGENITAL AND RHEUMATIC HEART DISEASE

The characteristic physical signs of rheumatic heart disease will be presented. From 5 to 10 per cent of the children with heart disease have structural defects of congenital origin. The physical signs of the three most frequently encountered congenital defects of the heart will be presented with the aid of lantern slides and contrasted with the signs of rheumatic heart disease. The differential diagnosis is important since the immediate recommendations to the patient, as well as his future outlook, depend upon an accurate diagnosis. (Slides)

Edward F. Bland, M.D. (Boston, Mass.)

Physician, Massachusetts General Hospital

2:30 RECOGNITION AND TREATMENT OF THE VARIOUS FORMS OF PERICARDITIS

Pericarditis is usually a secondary manifestation of a cardiac or non-cardiac disorder. Fibrinous pericarditis is often followed by pericarditis with effusion and occasionally results in the chronic and more serious forms of adhesive and constrictive pericarditis. The causes of acute fibrinous pericarditis and of serous effusions will be discussed. Chronic pericarditis, resulting in adhesions and in constriction, may produce the characteristic manifestations of a failing circulation. The serious forms of this condition are amenable to surgical treatment.

Walter A. Bloedorn, M.D., F.A.C.P. (Washington, D. C.)

Dean and Professor of Medicine, George Washington University School of Medicine

2:50 DISEASES OF THE AORTA

Aneurysm of the aorta is very common among syphilitic negroes. Its manifestations are quite variable and sometimes the diagnosis is not easy. Coarctation of the aorta is a congenital condition, the diagnosis of which is often missed because its possibility in youthful hypertensives is not thought of. Thrombosis and embolism of the aorta present bizarre pictures. Saddle embolization of the terminal aorta often, but not always, presents fairly typical manifestations. The symptoms and course of dissecting aneurysm of the aorta are protean and extremely variable from case to case. If certain examinations are made and these various conditions kept in mind, however, the diagnosis will be made much more often.

Wallace M. Yater, M.D., F.A.C.P. (Washington, D. C.)

Professor of Medicine and Chairman of the Department of Medicine, Georgetown University School of Medicine

3:20 RECESS

3:40 THE DIAGNOSIS AND TREATMENT OF HEART WOUNDS

Wounds of the heart which penetrate one of the cardiac chambers or divide one of the larger coronary arteries produce circulatory collapse, either from acute cardiac tamponade or direct blood loss. In most stab wounds and some bullet wounds, the blood is trapped in the pericardial sac, producing acute cardiac tamponade, which gives characteristic signs. The degree of circulatory collapse and the response to certain conservative measures are important in deciding whether the intrapericardial pressure may be relieved by aspiration or whether pericardiotomy and cardiorrhaphy will be necessary.

Isaac A. Bigger, M.D. (Richmond, Va.)

Professor of Surgery, Medical College of Virginia

Dr. I. A. Bigger

4:10 SURGICAL SHOCK AND CIRCULATORY FAILURE

The pathogenesis of surgical shock will be discussed. The value of a chemical examination of the blood and of other hematic determinations will be appraised, with special reference to their usefulness in the recognition of impending shock. The preoperative measures for the prevention of surgical shock and the emergency measures in the treatment of a patient in shock will be enumerated.

G. Louis Weller, Jr., M.D., F.A.C.P. (Washington, D. C.)

Associate Cardiologist, Children's Hospital

4:30 RECESS

WEDNESDAY, OCTOBER 16—MORNING SESSION

9:00 HYPERTENSIVE HEART DISEASE

No abstract submitted.

Thomas S. Lee, M.D., F.A.C.P. (Washington, D. C.)

Professor of Cardiology, Georgetown University School of Medicine

9:20 CHANGES IN THE FUNDUS OCULI IN CARDIOVASCULAR DISEASE

Consideration will be given, first, to those early ophthalmological changes which may be observed in the retina and retinal arteries while the vascular disease is in the reversible stage; second, to those changes which may be observed in the retina and its vessels and the choroid when the disease is fully developed. Diagnostic evidence as to whether the disease is primarily vascular, cardiac, or renal and the prognostic value of

William Thornwall Davis, M.D., F.A.C.S. (Washington, D. C.)

Professor of Ophthalmology, George Washington University School of Medicine ophthalmoscopic evidence will be discussed. The diagnostic and prognostic value of the appearances of the fundus in cardiac disease will be considered.

9:40 RENAL INVOLVEMENT IN HYPERTENSIVE-VASCULAR DISEASE

Edward Weiss, M.D., F.A.C.P. (Philadelphia, Pa.)
Professor of Clinical Medicine, Temple University

Experimental and clinical facts concerning the etiology and pathogenesis of hypertension. The central role of the kidney. Toxemia of pregnancy and the part it plays in renal-vascular disease. The significance of nephrosclerosis as the renal end result of hypertensive-vascular disease. The clinical picture of impaired renal function and renal failure in hypertensive-vascular disease. Malignant hypertension. Differential diagnosis of nephrosclerosis, glomerulonephritis, and pyelonephritis. The importance of urography, bacteriological and eye-ground studies. The general principles of the management of chronic kidney disease of hypertensive-vascular origin.

10:10 RECESS

10:30 CARDIAC ASPECTS OF CHRONIC NEPHRITIS

Maurice Charles Pincoffs, M.D., F.A.C.P. (Baltimore, Md.)
Professor of Medicine and Head of the Department of Medicine, University of Maryland

The following topics will be discussed: the association between the heart and the kidney lesions of glomerular nephritis and of nephrosis; hypertension in nephritis; acute forms of cardiac failure in nephritis; chronic forms of cardiac failure in nephritis; pericarditis associated with nephritis.

11:00 CARDIOVASCULAR SYPHILIS

Joseph Earle Moore, M.D. (Baltimore, Md.)
Associate in Medicine, Johns Hopkins University

No abstract submitted.

11:40 RECESS

WEDNESDAY, OCTOBER 16—AFTERNOON SESSION

2:00 CLINICAL AND ELECTROCARDIOGRAPHIC FINDINGS IN THE AGING HEART

Howard B. Sprague, M.D., F.A.C.P. (Boston, Mass.)
Instructor in Medicine, Graduate Course, Harvard Medical School.

Dr. H. B. Sprague

Of the diseases of the cardiovascular system, degenerative change dependent upon hypertension and coronary obstruction is the most frequent. The recognition of the incipience of this change is of the greatest importance. The present study reviews the pathology of the aging process in the cardiovascular system. It summarizes the physical, electrocardiographic, and autopsy findings of normal and of pathological age. Normal aging of the heart is fundamentally a process of atrophy; abnormal aging, of hypertrophy. The acceleration of degeneration out of proportion to compensatory mechanisms in a physically active individual results in premature cardiac breakdown. Statistical data are still insufficient to permit the formulation of inflexible standards of cardiac normality in individual cases.

2:40 THE DIAGNOSIS AND TREATMENT OF CARDIAC ARRHYTHMIAS

Brief mention will be made of the usual methods of diagnosis and management of the common cardiac arrhythmias, with a note to the effect that in each instance treatment of the irregularity is based on the nature of the clinical problem. The major part of the scheduled time will be devoted to controversial points concerning the advantages and disadvantages of certain digitalis preparations, the use of quinidine, the treatment of the Adams-Stokes' syndrome, paroxysmal tachycardia in infants, and other unusual conditions. Emphasis will be placed upon the necessity of etiological diagnosis in the management of the arrhythmia. A number of illustrative cases will be presented by means of lantern slides. (Slides)

J. Edwin Wood, Jr., M.D., F.A.C.P. (University, Va.)

Professor of Practise of Medicine, University of Virginia

3:10 RECESS

3:30 FAILURE OF THE LEFT AND RIGHT HEART

Congestive heart failure may arise from extracardiac conditions, such as thyrotoxicosis, myxedema, or vitamin B_1 deficiency; or from intra-cardiac conditions, such as coronary insufficiency, structural lesions of the valves and pericardium, or myocardial degeneration. The discussion will be devoted to a clarification of the following essential points: A variety of exciting causes may produce failure when a predisposing factor is present. The signs and symptoms of heart failure are often confused with those of nephritis and failure of the peripheral circulation. The treatment and prognosis of right heart failure are not identical with those of left heart failure, therefore these two types of failure must be differentiated. Incipient, chronic, and acute failure of the left or right heart should be recognized and treated appropriately.

James Alexander Lyon, M.D., F.A.C.P. (Washington, D. C.)

Professor of Clinical Cardiology, Georgetown University School of Medicine

4:00 DIGITALIS: ITS ACTION AND USAGE

Recent developments show that the primary action of digitalis is on the heart muscle directly. There are two broad indications for the use of digitalis and no contraindications. The use of digitalis in coronary disease, in pneumonia, in other infectious diseases, and in tachycardias presents special problems. Effective digitalization may be accomplished by small doses as well as by large doses, but there are significant differences in the results obtained by the two methods.

Harry Gold, M.D. (New York City)

Assistant Professor of Pharmacology, Cornell University

Preparations of digitalis leaf and of the tincture show wide variations in potency which present serious problems in clinical digitalization. Recent clinical studies of purified glucosides have advanced in significant respects the efficiency of digitalis therapy. It is proposed to devote the discussion to the elucidation of the foregoing statements concerning the actions and usage of digitalis.

Dr. H. Gold

CAT.

4:30 RECESS

THURSDAY, OCTOBER 17—MORNING SESSION

9:00 CARDIOVASCULAR COMPLICATIONS OF PROSTATIC OBSTRUCTION

Ralph Michael LeComte, M.D., F.A.C.S. (Washington, D. C.)

Professor of Urology, Georgetown University School of Medicine

The following points will be discussed: the incidence of cardiovascular lesions in patients having prostatic obstruction; the types of cardiovascular lesions which are likely to be encountered owing to the age incidence and the complications of prostatism; the detection of important cardiovascular lesions during the routine examination of the prostatic patient; and the limitations that the presence of associated circulatory disorders may impose upon the treatment of patients who have prostatic obstruction.

9:20 RECOGNITION AND MANAGEMENT OF CARDIAC NEUROSIS

Joseph B. Wolffe, M.D. (Philadelphia, Pa.)

Associate Professor of Medicine, Temple University

Cardiac neurosis is defined. The recognition and differentiation between cardiac neurosis and organic disease are discussed. The fact that the heart is endowed with sensory nerves and that abnormal cardiac sensations impress themselves upon the gnostic centers of the brain and can be translated into motor patterns is utilized as an aid in differentiating and recognizing variations in cardiac force, rhythm, and rate experienced by patients. A moving picture will be shown to illustrate this point. The role which the autonomic system plays in cardiac neurosis is briefly discussed. A review of the treatment of various phases concludes the presentation. (Moving picture)

9:50 DIAGNOSTIC CRITERIA OF CORONARY ARTERY DISEASE

Harold M. Marvin, M.D. (New Haven, Conn.)

Associate Clinical Professor of Medicine, Yale University

The diagnostic significance of the clinical evidence of coronary artery disease, as demonstrated by the presence of typical angina pectoris, of coronary thrombosis, and of congestive heart failure, will be considered. X-ray evidence of coronary artery disease, such as calcification of the coronary arteries, ventricular aneurysms, diminished ventricular pulsations, and reversal of pulsations, will be discussed. The meaning of partial heart block, of deep Q waves, and of changes in the QRS group, the RS-T segments, and the T waves, as demonstrated electrocardiographically, will be explained. The value of special tests involving exercise or anoxemia will be appraised.

10:20 RECESS

10:40 ACUTE CORONARY THROMBOSIS

Edwin Cowles Andrus, M.D., F.A.C.P.
(Baltimore, Md.)

Associate Professor of Medicine, Johns Hopkins University

The clinical syndrome which is called "Acute Coronary Thrombosis" is, in reality, that of myocardial infarction. It is an incident, or accident, in the life of a person with atherosclerosis of the coronary arteries. The discussion will include consideration of (1) Etiology and predisposing factors: relation to body build, cholesterol metabolism, overnutrition, tobacco, and exertion; (2) Pathology: the role of atherosclerosis and intramural hemorrhage; the factors determining the location and size of the myocardial infarct; (3) Symptoms and signs: relation of pain and its distribution, fall of blood pressure, acute cardiac dilatation, pericarditis, fever, leukocytosis, increased erythrocyte-sedimentation velocity, embolic phenomena, cardiac arrhythmias; (4) Treatment: the physiological problem; the importance of rest, use of xanthine derivatives, oxygen; (5) Prognosis.

11:10 THE ROLE OF EFFORT, TRAUMA, WORK AND OCCUPATION IN THE ONSET AND SUBSEQUENT COURSE OF CORONARY OCCLUSION

Arthur M. Master, M.D., F.A.C.P.
(New York City)

Associate in Medicine, College of Physicians and Surgeons, Columbia University

Dr. A. M. Master

The findings in an investigation of the events associated with the onset of acute coronary occlusion, in 1,700 attacks, will be discussed to show the relationship between external factors, such as trauma, and the occurrence of acute coronary occlusion; the percentage of attacks occurring during sleep, rest, and mild, moderate, or severe activity; and the percentage occurring in the various types of occupations and classes of society. A follow-up study of 415 patients who recovered from a coronary occlusion has revealed that more than half returned to work, usually within six months after discharge. The percentage of those returning to work in the various age groups and professional classes, the chief causes of failure to return to work, and the incidence of further attacks of occlusion or heart failure and the mortality rate in the two groups, will be presented.

11:40 RECESS

THURSDAY, OCTOBER 17—AFTERNOON SESSION

2:00 Diagnosis and Conservative Treatment of Peripheral Vascular Disease

The diagnosis of peripheral vascular disease must rest on an understanding of the pathological physiology involved in a given case. Therapy, whether conservative or surgical, must also be based on pathological physiology. An endeavor will be made to present a method for differential diagnosis between the more common diseases of the arterial, venous, and lymphatic systems. A critical evaluation of the present accepted methods of conservative therapy will be presented. Indications and contraindications for each form of therapy will be given. Illustrative case histories and experimental studies will be included.

Irving Sherwood Wright, M.D., F.A.C.P. (New York City)

Professor of Clinical Medicine and Director of the Department of Medicine, New York Post-Graduate Medical School and Hospital, Columbia University

2:40 Surgical Treatment of Peripheral Vascular Diseases

No abstract submitted.

Norman E. Freeman, M.D., F.A.C.S. (Philadelphia, Pa.)

Assistant Professor of Research Surgery, University of Pennsylvania

3:10 Recess

3:30 The Heart During Anesthesia

No abstract submitted.

Capt. Achilles L. Tynes (Washington, D. C.)

Medical Corps, United States Army, Walter Reed General Hospital

4:00 Operative Risks in Cardiac Patients

No abstract submitted.

William S. Love, Jr., M.D., F.A.C.S. (Baltimore, Md.)

Associate Professor of Medicine, University of Maryland

SCIENTIFIC AND PUBLIC HEALTH EXHIBITS

The Scientific and Public Health Exhibits will be shown in the East and Pan-American Rooms and the parlor adjoining the latter at the Mayflower Hotel. A special motion picture booth has been constructed in the East Room and there will be a continuous showing of films on various scientific subjects.

There will be forty exhibits as follows:

Booth Number	*Subject*	*Sponsors*
S1.	Lesions of the Vulva	Clarence K. Fraser, M.D. and Howard F. Kane, M.D., F.A.C.S., Department of Obstetrics and Gynecology, George Washington University School of Medicine
S2.	Nutrition in Diseases of the Heart and Arteries	Henry Monat, M.D.

Booth Number	*Subject*	*Sponsors*
S3.	VENOUS BLOOD PRESSURE IN CARDIOVASCULAR DISEASE	Hugh H. Hussey, M.D., and James Ross Veal, M.D., F.A.C.S.
S4.	ROUTINE TREATMENT OF GONORRHEA IN FEMALES	Bernard Notes, M.D., F.A.C.S.
S5.	ALLERGY	Robert Sterling McGrath, M.D.
S6.	TOMOGRAPHY OF THE CHEST AND LARYNX	Warwick Clinic
S7.	PHOTOGRAPHY OF DISEASES OF THE EAR, NOSE AND THROAT	Irvin Hantman, M.D.
S8.	THE VELOCITY OF BLOOD FLOW	Benjamin Manchester, M.D.
S9.	CEREBRAL ANGIOGRAPHY	Department of Neurology, George Washington University School of Medicine
S10.	CANCER OF THE STOMACH	Fred A. J. Geier, M.D., from the Clinic of Dr. William Earl Clark and Associates
S11.	OPHTHALMOLOGY	Department of Ophthalmology, George Washington University School of Medicine
S12.	PRESERVED BLOOD AND PLASMA TRANSFUSIONS	Charles Stanley White, M.D., F.A.C.S., James Lloyd Collins, M.D., F.A.C.S., Jacob J. Weinstein, M.D.
S13.	CONGENITAL HEARTS	Margaret Nicholson, M.D.
S14.	STRABISMUS	Oscar Wilkinson, M.D., F.A.C.S., Richard W. Wilkinson, M.D., F.A.C.S.
S15.	SOME COMMON SURGICAL CONDITIONS OF THE COLON, RECTUM AND ANUS	Joseph Horgan, M.D.
S16.	THE USE OF HISTAMINE AND ANTI-HISTAMINE (HISTAMINASE) IN CLINICAL MEDICINE	Roy Lyman Sexton, M.D., F.A.C.P., William A. Withers, M.D., John E. Morris, M.D., Alan Frank Kreglow, M.D.
S17.	INTERVERTEBRAL DISC RUPTURE	W. Ross Morris, M.D., F.A.C.S.
S18.	MEDICAL ARTS SECTION	Doctors Hospital. Patric Claiborne, Artist
S19.	THE ELECTROCARDIOGRAM	The Diagnostic Clinic
S20.	PHYSICAL THERAPY IN THE TREATMENT OF CARDIOVASCULAR DISEASE	Isadore Levin, M.D.
S21.	TWENTY-FOUR HOUR TEST FOR PREGNANCY	Department of Pathology, George Washington University School of Medicine
S22.	MORTALITY REDUCTION IN APPENDICITIS	Edward A. Cafritz, M.D., F.A.C.S.
S23.	PERIPHERAL VASCULAR DISEASE	Emil J. Hildenbrand, M.D.
S24.	ACTIVITIES OF THE LABORATORIES	St. Elizabeths Hospital
S25.	SOME ACTIVITIES AT WALTER REED GENERAL HOSPITAL, WASHINGTON, D. C.	

PUBLIC HEALTH EXHIBIT

Booth Number	*Subject*	*Sponsors*
P1.	DEMONSTRATIONS	Washington Heart Association
P2.	REGULATION OF FOODS, DRUGS AND COSMETICS	United States Food and Drug Administration
P3.	SOCIAL HYGIENE AND YOUR COMMUNITY	Social Hygiene Society of the District of Columbia
P4.	RELATION OF HEALTH SECURITY ADMINISTRATION TO PHYSICIAN IN CLINIC, STAFF AND PRIVATE PRACTICE	Health Security Administration
P5.	THE DOCTOR SAVES SIGHT THROUGHOUT LIFE	District of Columbia Society for the Prevention of Blindness
P6.	DEMONSTRATIONS	Incubator Fund, Inc.

Booth Number	*Subject*	*Sponsors*
P7.	Public Health Aspects of Rheumatic Heart Disease	National Institute of Health
P8.	Cardiometric Studies on Children	National Institute of Health
P9.	USP and NF Offers 1,300 Drugs for Individualized Medicine	District of Columbia Pharmaceutical Association
P10.	Maternal and Child Health Services under the Social Security Act	Children's Bureau, United States Department of Labor
P11.	Demonstrations	American Registry of Pathology, Army Medical Museum, Office of the Surgeon General
P12.	Venereal Disease in the District of Columbia—Prevalence and Incidence	Division of Venereal Disease, United States Public Health Service
P13.	Demonstrations	District of Columbia Health Department
P14.	Health Conditions in the District of Columbia	Washington Council of Social Agencies
P15.	Cardiovascular-Renal Disease	Eugene R. Whitmore, M.D., George J. Brilmyer, M.D., Department of Parasitology and Pathology, Georgetown University School of Medicine

Motion Pictures

The Heart Beat Mechanism in Health and Disease	Clayton Lundy, M.D., Sponsored by Washington Heart Association
Skin Diseases	Department of Dermatology, Georgetown University School of Medicine
Contact Glasses	Victor Simpson, M.D.
The Science and Art of Obstetrics—Eclampsia	Joseph B. DeLee, M.D., F.A.C.S., University of Chicago
With These Weapons	Division of Venereal Disease, United States Public Health Service
Three Counties Against Syphilis	Division of Venereal Disease, United States Public Health Service
Reconstruction of the Face	Robert E. Moran, M.D., F.A.C.S.
Modified Manchester Operation for Procidentia Uteri	Read N. Calvert, M.D., F.A.C.S.
Pneumonia—Diagnosis and Treatment	Norman Plummer, M.D., F.A.C.P. and Herbert K. Ensworth, M.D., New York Hospital
Scarlet Fever	Gladys H. Dick, M.D. and George F. Dick, M.D., University of Chicago
Pernicious Anemia	William P. Murphy, M.D., Peter Bent Brigham Hospital, Boston

TECHNICAL EXHIBIT

There will be an unusually fine Technical Exhibit in the Promenade of the Mayflower Hotel. Thirty-four firms will participate as follows:

American Hospital Supply Corporation	(Booth 27)
Beuchler's	(Booth 26)
Borden Company	(Booth 13)
Brand, Paul L.	(Booth 2)
Burroughs Wellcome & Company	(Booths 7 and 8)
Cameron Surgical Specialties	(Booth 28)
Chestnut Farms—Chevy Chase Dairy	(Booth 5)
Ciba Pharmaceutical Products, Inc.	(Booth 38)
Coco-Cola Company	(Booth 21)
Davies, Rose & Company, Ltd.	(Booth 30)
Davis, R. B., Company	(Booth 4)
DePuy Manufacturing Company	(Booth 17)
Doak Company	(Booth 9)

Doho Chemical Company	(Booth 36)
Fleet, C. B., & Company	(Booth 29)
Gibson Company	(Booth 12)
Horlick's Malted Milk Corporation	(Booth 16)
Kloman's Instrument Company	(Booth 35)
Lederle Laboratories	(Booth 36)
Liebel-Flarsheim Company	(Booths 32 and 33)
Lilly, Eli and Company	(Booth 34)
Mallinckrodt Chemical Works	(Booth 1)
Maxwell & Tennyson	(Booth 3)
Mead Johnson & Company	(Booth 11)
Patch, E. L., Company	(Booths 18 and 19)
Peoples Drug Stores, Inc.	(Booth 25)
Petrolagar Laboratories	(Booth 14)
Philip Morris & Company	(Booth 23)
Saunders, W. B., Company	(Booth 6)
Sharp & Dohme, Inc.	(Booth 32)
S.M.A. Corporation	(Booth 15)
Smith, Kline & French Laboratories	(Booth 31)
Squibb, E. R. & Sons	(Booth 10)
Wyeth, John & Brother, Inc.	(Booth 24)

REGISTRATION

Registration will begin promptly at the Mayflower Hotel at 9:00 a.m., Tuesday, October 15. Arrangements have been made to facilitate the registering of the large number which is expected on the first morning of the Assembly so that there will be as little delay as possible. Special provisions have been made for dentists, nurses, pharmacists and others who wish to attend some of the sessions so as not to conflict with the physicians seeking immediate admittance. No one will be admitted to the scientific sessions without a badge which, together with the official programs, is obtainable at the registration desk.

All who register prior to 11:00 a.m., Tuesday, October 15, will be given their tickets for the Tuesday luncheon. The luncheon will be included in the registration fee, which is $3.00 for out-of-town physicians and non-members of the Society. There will be no charge to members of the Society. Tickets for the luncheons to be given by the Georgetown University and George Washington University Schools of Medicine alumni groups and the annual banquet can be purchased at the registration desk.

Special arrangements have been made for the handling of telephone calls. Names of physicians being called will appear on a blackboard in the Grand Ballroom at the Mayflower. In responding to calls physicians should make inquiry at the registration desk where a telephone may be found.

DOCTORS' HOBBY SHOW

The committee in charge of the Doctors' Hobby Show has been most gratified with the response of physicians invited to exhibit their hobbies during the Assembly. As it was the first time that a project of this kind had been undertaken by the Medical Society, the Committee to begin with was not overly optimistic. However, genuine enthusiasm has been shown for this new feature.

The Society is indebted to the Woman's Auxiliary which has been of great assistance in working out the details of the Show. Mrs. Thomas E. Neill, Chairman of the Auxiliary Committee, has devoted a great deal of time and effort to this undertaking. Mrs. Daniel L. Borden, President of the Auxiliary, has also coöperated in every way possible.

Members of the Society will be surprised at the variety of hobbies and the versatility of Washington physicians. The following is a partial list of exhibitors and their hobbies:

Collecting: R. N. Calvert (spoons); J. L. DeMayo (stamps); A. W. Dunbar (art objects); G. W. Leadbetter (butterflies); D. B. Moffett (art objects); W. A. Rath (art objects); I. J. Silverman (vases); R. L. Silvester (stamps); H. M. Smith (silverware and embroidery); W. R. Stokes (stamps); E. R. Whitmore (objects relating to St. Nicholas); R. W. Wilkinson (spoons).

Handicraft: D. L. Borden (model boats); F. O. Coe (woodworking); H. L. Darner (needlepoint); J. B. Glenn (model boats); F. M. Hand (woodworking); H. F. Kane (model boats); R. M. LeComte (bookbinding); R. H. Mitchell (model boats); G. W. Reeves (woodworking); A. W. Smith (model trains); J. D. Stout (woodworking); D. D. V. Stuart, Jr. (model boats).

Photography: H. L. Darner, W. W. Eldridge, L. H. French, F. E. Gantz, F. A. J. Geier (motion pictures), C. L. Hall (motion pictures), L. D. Hubbard, H. F. Kane (motion pictures), J. Kreiselman, G. W. Leadbetter (motion pictures), E. A. Merritt, P. S. Putzki (motion pictures), W. A. Rath, R. L. Sexton (motion pictures).

Art: V. R. Alfaro (paintings); P. A. Lichtman (paintings); F. A. Martinez (paintings); I. J. Silverman (sketching); F. G. Speidel (painting and sketching); J. H. Trinder (restoration of paintings).

Flowers: J. B. Bogan, E. A. Merritt, P. S. Putzki.

Miscellaneous: H. F. Anderson (mounted animal heads); F. E. Gibson (automobile expense records); E. J. C. Hildenbrand (bull dogs); D. Johnson (hunting equipment); L. Tayler-Jones (house planning and architecture); K. B. B. and S. R. Karpeles (hunting trophies); E. A. Kittredge (poetry); R. W. Murray (mounted deer heads); J. B. Nichols (genealogy); J. B. Nichols (gun display); A. A. Preece (mounted fish); M. H. Prosperi (musical compositions); G. G. Purse (poetry); W. R. Stokes (gun display).

REPRODUCTIONS OF PAINTING AVAILABLE

"Osler at Old Blockley," a painting in oil by Dean Cornwell, was unveiled at the dedication of the Osler Memorial Building on the grounds of the Philadelphia General Hospital this past June.

The painting depicts Osler at the side of an elderly patient on the hospital grounds. Surrounding Osler and the patient are internes who have stopped with him as they were on their way to the autopsy house to observe one of his famous post mortems. This is the second painting in the series "Pioneers of American Medicine" sponsored by John Wyeth & Brother as part of a project to highlight the contributions of Americans to the advancement of medicine. "Beaumont and St. Martin" was the first painting in the series.

Colored reproductions of "Osler at Old Blockley," suitable for framing may be obtained free by addressing requests to Theodore Wiprud, Managing Editor, Medical Annals of the District of Columbia, 1718 M Street, N.W., Washington, D. C.

RED CROSS NOTES

The District of Columbia Chapter, American Red Cross, announces its 24th Annual Roll Call, September 23–October 19, and solicits your membership support. Please join through your own section, Doctors' Division, Professional Group. Collectors of these subscriptions will be stationed in hospitals only.

The Chapter extends you a cordial invitation to attend:

Open House on Friday, September 13, 4 to 7 p.m., Roll Call Headquarters, the Walsh Mansion, 2020 Massachusetts Avenue.

Mass Meeting on Red Cross Sunday, September 22, late afternoon, at the Water Gate. Special music.

Flag Raising, 12 noon, September 23, at the triangle in front of the District Building.

John W. Warner, M.D.
Division Chairman

MEDICAL ANNALS

OF THE

DISTRICT OF COLUMBIA

EDITORIAL OFFICE, 1718 M ST., N.W. WASHINGTON

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EDITORIALS

ALL EYES ARE ON WASHINGTON

What happens in Washington has become increasingly important to every citizen in this country. Hardly a day passes that some action is not taken by the government which vitally affects the people's welfare. It is safe to say that so long as the present critical situation in world affairs exists, all eyes will be focused on the Nation's Capital.

From the standpoint of the medical profession, the coming year will be highly important. Overshadowing everything else are plans for the defense of the Western Hemisphere. At the present moment, a large force under the direction of the Committee on Medical Preparedness is at work in the Chicago headquarters of the American Medical Association, recording important information about all physicians in the United States. These data are to be made available to the War Department so that in the event of hostilities the greatest mobilization of medical personnel in the history of this country will be facilitated. It is to be hoped that this will not be necessary, but, if so, no group will respond more promptly to the Nation's call, and serve with greater faithfulness, than will the medical profession.

There is, of course, in the offing the trial to be held in the District Court on the charges against the American Medical Association, the Medical Society of the District of Columbia, the Harris County Medical Society (Texas), the Washington Academy of Surgery, and individual defendants for violation of the Sherman Anti-trust Act. This case is set for October 21 and will be one of the most significant in a decade.

Finally, there is the 1940 ANNUAL SCIENTIFIC ASSEMBLY of the Medical Society of the District of Columbia, which will be held on October 15, 16 and 17. It is no exaggeration to say that this will be "the scientific event of the year in the Nation's Capital." Outstanding figures in the practice of medicine will participate in the scientific sessions. Other arrangements for the ASSEMBLY are far more ambitious than in any previous year. A reading of a detailed description of the ASSEMBLY and what is in store for those who attend will confirm this statement. The Committee on Arrangements is confident that attendance at the ASSEMBLY will be gratifyingly large and that physicians will enroll from many of the nearby states.

All in all, the next few months promise to be exciting ones, and we who live in the Nation's Capital will be privileged to observe at first hand history in the making.

VENEREAL DISEASE SURVEY

In the summer of 1939 a survey of venereal diseases in the District of Columbia was undertaken by the U. S. Public Health Service at the request of the Medical Society of the District of Columbia, the Medico-Chirurgical Society, the District Health Department, and the District Social Hygiene Society. Recently a report on the survey, prepared by Lida J. Usilton, Senior Statistician, Division of Venereal Diseases, U. S. Public Health Service, and Dr. George C. Ruhland, District Health Officer, was made public. Physicians will find it an enlightening appraisal. They will naturally be pleased with the commendatory comments on the treatment given by private practitioners. However, they will also discover there is need for a more adequate program.

Unfortunately, space is not available for the publication of the full text of the report in the Medical Annals. The following summary will be of special interest to Society members:

"A survey of all medical sources of treatment was made to determine the number of persons with venereal disease under authorized medical care in the District of Columbia. The data were collected for patients under treatment for syphilis any time during the 5-month period January 1, 1939 to June 1, 1939 and for gonorrhea any time during May 1939.

"There were 1,185 physicians in active practice in the District, of whom 1,153 (97 per cent) made returns on the survey. Of the physicians reporting, 68 per cent had no patients with either syphilis or gonorrhea under treatment during the survey period. The care of patients with venereal disease was concentrated among a few physicians; 8 per cent of the physicians had 73 per cent of the total private patients.

"Each year in the District an estimated 6,270 persons sought medical care for the first time for syphilis. Only 1,300 of these were in the early stage of the disease when treatment began. The annual attack rate based on these figures is 2 per 1,000 population. With a persistent annual attack rate of 2 per 1,000, at least one person in every 10 adults will acquire syphilis at some time in life.

"Half of the persons who acquire syphilis in the District of Columbia are under 25 years of age, and over half of these are in their teens.

"Every day an average of 5,084 persons are under treatment for syphilis in the District of Columbia. Of these, 4,000 failed to seek treatment for syphilis while it was in the early stages.

"A larger proportion of the private physician's patients have early syphilis than of the public clinic patients—27 per cent vs. 16 per cent.

"The clinics hold the patients under treatment for a longer period of time than do the private physicians but satisfactorily treat proportionately only half as many. Available information indicates that the treatment in the clinics lacks regularity. The performance of the public clinic is only half as satisfactory as that of the private physician.

"During the past year in the District of Columbia an estimated 4,300 persons sought treatment for gonorrhea. Concurrent with the increasing use of sulfanilamide in the treatment of gonorrhea there has been a marked reduction in the number of persons seeking medical care for the disease.

"The prevalence rate for venereal disease is proportionately higher in the economic group earning under $1,000 than in those groups earning over this amount. However, among those persons earning a moderate income ($1,000 to $2,999), venereal disease does not occur any more frequently than among those in the higher income brackets."

Suggestions for further investigations were as follows:

"The factual material made available through the present survey suggests the need for a further investigation into the clinic facilities in the District of Columbia to determine:

1. Existing treatment schedules and practices used in clinics.

2. Relationship between size of patient-load and unit of physician-time available.

3. Clinic organization as to comfort and privacy of the patient for interviews, physical examinations, and treatment.
4. Duties assigned to personnel commensurate with their training.
5. Proximity of clinic facilities to patient-load.
6. Convenience of clinic hours.
7. Ways and means to strengthen the case-finding and case-holding program."

The following recommendations were made by the Medical Society of the District of Columbia and the Medico-Chirurgical Society:

"With the prospect of increasing interest in the efficiency of the venereal disease control program in the District of Columbia, it is timely that the results of the present survey be made available to the public in order to furnish a base line against which to project future information.

"The results of the survey indicate several ways in which our efforts can be made more effective:

1. Renewed emphasis should be placed on the building of a more efficient case-finding and case-holding program for early syphilis in the clinics of the District of Columbia. Provisions should be made for an increased staff to do contact-tracing. Follow-up efforts should be restricted to those patients listed for this purpose by the mechanical reporting system. These include (1) patients with early syphilis who have been under observation and treatment for a period of 2 years or less and who have received less than 20 injections of an arsenical and of a heavy metal, (2) pregnant women throughout the period of pregnancy, and (3) children of syphilitic parents until they reach the age of 3 years.
2. Restriction of public clinic treatment to an amount required to obtain the most probable maximum benefits. A suggested pattern for patients with early syphilis (primary, secondary, early latent within the first 4 years of the disease) of at least 20-20 injections, except in those cases where the patient experiences repeated mucocutaneous relapses.
3. Patients over the age of 45 years with late latent syphilis should not be treated in public clinics except in those instances in which the clinic director specifically indicates that such treatment is advisable.
4. Since late syphilis is an individual problem, the necessity for providing treatment with public funds should be left to the discretion of the clinic director.
5. A resurvey of the physicians in the District of Columbia should be made each year for 5 years to measure the progress in the control of venereal diseases by private physicians as well as public clinics."

Members desiring complete copies of the report can obtain them by calling the Society's office.

WHO ARE THE YOUNG PHYSICIANS?

Not infrequently a young physician is heard to complain that he is unfairly dealt with by his more mature colleagues. Older practitioners who are well established, he contends, give him little encouragement. On the contrary, he feels, they are intolerant and often selfish.

Undoubtedly there are instances where this criticism is justified. Generally speaking, however, older physicians are considerate and helpful, as many young practitioners will testify. These men have not forgotten their own struggles to make a place for themselves, and like good parents, endeavor to make the way less difficult for those who come after them. They are also genuinely interested in current problems and their probable effect on the future of medical practice. New ideas are welcomed by them in the hope that a solution will be found.

The young practitioner may be surprised to find that the alert and progressive physician in his community is not necessarily his classmate nor one who has been in practice four or five years. He may be the professor under whom he studied at medical school or the white-haired doctor around the corner.

Mental youthfulness has little to do with years. It is a quality that some men have and others do not. A young man can be as intolerant, selfish and conservative as a sixty-year-old. On the other hand, the mature individual may find each day a new adventure, giving zest and significance to life.

We have many men of the latter type in our Medical Society. Some of them are giving generously of their time in the interests of the profession. Whatever their accomplishments, the sole beneficiaries will be the practitioners of tomorrow.

The point of these comments is that differences in age and viewpoint can be bridged and that there is a common ground for young and old practitioners. But they must earnestly seek it.

PERTINENT PARAGRAPHS

August Meetings Although the Society's activities are not yet in full swing, boards and committees have been active. Some of them have carried on without formal meetings. The following regular meetings were held during the month of August:

August 19	Obstetrical Board
August 26	Executive Board
August 27	Subcommittee on Finance, Annual Scientific Assembly

•

District Preparedness Program The Medical Society's Committee on Medical Resources is now well under way with its program. The purpose of its efforts, as stated in the communication which has gone forward to the members, will be "to coöperate with the American Medical Association's Committee on Medical Preparedness, take steps to safeguard the health needs of the civilian population, determine the status of physicians in the District of Columbia, and to give every assistance possible to members of the Society in the event of war." The Committee has decided that the third objective, that of obtaining important facts about Society members so that it can intelligently develop a preparedness program for the District, should be undertaken first. It is to be hoped that members of the Society will respond promptly and coöperate in every way possible with the Committee.

It has been made clear in the letter to members that the questionnaire being sent out by the local committee has nothing to do with the form received from the Committee on Medical Preparedness. This form physicians are urged to forward immediately if they have not already done so.

Duplication of information requested by the Committee on Medical Preparedness and the Society's Committee on Medical Resources was unavoidable because the facts furnished by the local physicians to the Committee are not available to the Society.

Following its survey other requests for data may be sent by the Committee on Medical Resources to physicians in the District. Only such information as is of vital importance will be requested. The Committee is confident that it can count upon the loyal support of every physician who belongs to the Medical Society.

•

Virginia's Marriage Examination Law Physicians in the District should familiarize themselves with the requirements of Virginia's new premarital examination law which became effective on August 1, 1940, because among other things it provides that any licensed physician of Virginia or other state, territory, country, or the District of Columbia may make examinations of persons contemplating marriage. Both parties must have a blood test and a physician's certificate before a marriage license can be issued. The following instructions to physicians are of particular interest:

Who May Furnish Statement

> If the initial serological test, as described below, *does not* indicate evidence of syphilis, the statement must be made by the physician who caused the test to be made.
>
> If the initial serological test *does* indicate evidence of syphilis, necessitating additional tests, examinations, etc., the statement may be signed and furnished to the applicant by either

(a) the physician who ordered such tests and made such examinations, etc., or (b) any other physician to whom a report of such tests, etc., has been made.

In any event, the same physician who signs the required statement and furnishes it to the applicant must make the required reports to the State Department of Health, and in person inform both parties if evidence of syphilis is indicated.

Required Tests, Reports, etc.

Before any physician may lawfully sign and furnish to the applicant a statement such as is required by the 1940 Act, the following requirements must be met:

1. A specimen of the applicant's blood must be forwarded to the State Health Department or to a laboratory approved for such purpose by the State Health Commissioner for a standard serological test such as is approved by the State Health Commissioner.

If the First Serologic Test Does Not Indicate Evidence of Syphilis

1. The physician shall transmit to the State Health Department—
   (a) The laboratory report, or a copy thereof.
   (b) Part II of the Standard Forms, filled out as indicated.

The required statement (Part I) may then be signed and furnished to the applicant without further tests, examinations, etc.

If the First Serologic Test Does Indicate Evidence of Syphilis

I. The serological test must be repeated, a physical examination must be made and the applicant's medical history must be obtained.

If from the combined tests, physical examination and medical history, evidence of syphilis is still indicated, the physician must also:

II. In person inform both parties for whom the marriage license is to be obtained of the result of the test or tests, the nature of the disease, and the possibilities of transmitting the disease to the marital partner and to their children.

In any event the physician must:

III. Transmit to the State Health Department—
   (a) Both Laboratory reports, or copies thereof.
   (b) Part II of the Standard Forms, filled out as indicated.

The Physician may then execute and furnish to the applicant the required statement (Part I).

As to laboratory tests required, a communication was received from the District Health Officer objecting to serological examinations being made by the local Health Department laboratory because of requests "arising out of certain adjacent territory." The Health Officer was obviously referring to the new premarital examination requirements in Virginia. The Society's Executive Board supported his position, "that the facilities paid for by local taxpayers should be reserved for them . . . and that the longer we will undertake to carry the service for other jurisdictions the longer will the services in those jurisdictions remain undeveloped."

Attention of District physicians is directed to the requirement that laboratory tests must be made by the Virginia State Health Department laboratory or the State Health Department laboratory of any state or Federal Government laboratory. In addition, any laboratory in Virginia approved by the State Health Commissioner for the performance of these tests may also do the tests.

A supply of physicians' reports and "Instructions to Physicians Furnishing Statement Required by Virginia Code Section 5073a as a Prerequisite to Issuance of Marriage License," together with "Questions and Answers on the Marriage Examination Law," are available at the Medical Society's office. They will be mailed to members upon request.

●

First Program of the Year

The first scientific program of the year, which is to be held on October 9, promises to be of unusual interest because it is a prelude to the 1940 Annual Scientific Assembly. Dr. Lauritz S. Ylvisaker, Associate Medical Director of the Prudential Insurance Company of America, and Mr. Pearce Shepherd, Associate Actuary of the Prudential, will speak on "The Importance of Heart Disease." They will approach this subject from an actuarial standpoint, presenting the most recent statistical information.

It is hoped that there will be a large number present for this meeting.

●

Building Reconditioned

Members attending the first meetings in the fall will be pleasantly surprised. The Medical Society's building will not only have been renovated but the library furniture reconditioned and furnishings replaced. The Society is justly proud of its building, which is one of the finest in Washington.

Few medical societies in the country have one which compares to it. The building stands as a tribute to the vision and foresight of members of the Society still living who conceived a great undertaking and against many odds carried it through to completion.

●

Progress of the Telephone Exchange

Contracts are still being received from physicians desiring to subscribe to the proposed Society-operated twenty-four hour telephone exchange known as Medical Bureau. However, a number of additional subscribers are necessary before the Bureau can be established. It is suggested that physicians who are not familiar with the variety of services which the Bureau will provide, get in touch with a member of the Committee, who will explain its many features. The personnel of the Committee is as follows: Dr. Joseph Horgan, *Chairman*, Dr. R. Lomax Wells, *Vice Chairman*, Drs. Howard P. Parker, Norvell Belt, Allen S. Cross, Herman S. Hoffman, William F. Burdick and Mr. Theodore Wiprud, *Secretary*.

MEETINGS

WEDNESDAY, OCTOBER 9

"The Importance of Heart Disease"

Lauritz S. Ylvisaker, M.D., Associate Medical Director
and
Mr. Pearce Shepherd, Associate Actuary
The Prudential Insurance Company of America

TUESDAY, WEDNESDAY, THURSDAY, OCTOBER 15, 16, 17

Annual Scientific Assembly
See complete program elsewhere in this issue.

WEDNESDAY, OCTOBER 23

Program to be announced.

WEDNESDAY, OCTOBER 30

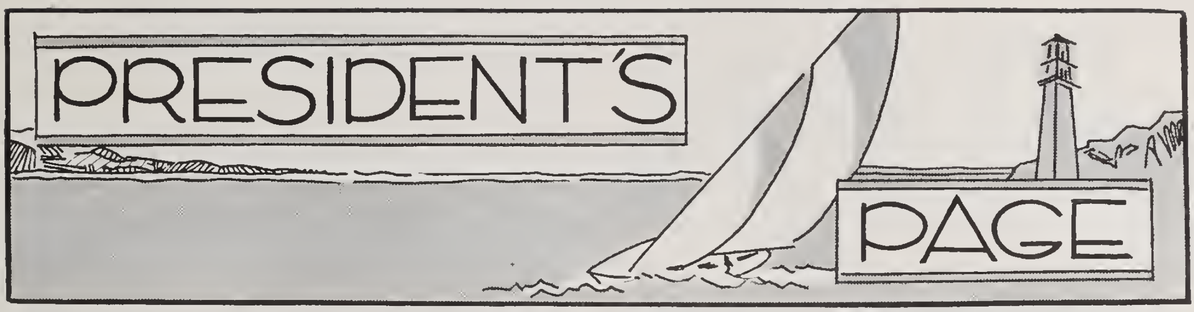
"The Use of Radium in Tumors of the Bladder and Prostate'
Hugh H. Young, M.D., F.A.C.S.
Professor of Urology, Johns Hopkins University
School of Medicine

"The Diagnosis and Treatment of Cancer of the Pharynx"
Arthur C. Christie, M.D., F.A.C.P.
Professor of Clinical Radiology, Georgetown University
School of Medicine

RADIO PROGRAMS

The Committee on Radio Education presented a number of talks on timely subjects during the summer months, as shown by the following list of broadcasts which were given over Station WMAL each Tuesday morning:

July 9:	"B.M.R. (Basal Metabolism Rate)" Dr. Roy Lyman Sexton
July 16:	"Swimming Hazards" Dr. Darrell C. Crain, Jr.
July 23:	"Protection of the Eyes in Summer" Dr. Don S. Knowlton
July 30:	"New Noses for Old" Dr. Don S. Knowlton
August 6:	"Ptomaine Poisoning" Dr. Fred A. J. Geier
August 13:	"Health Through the Ages" Dr. Darrell C. Crain, Jr.
August 20:	"Exercise After Forty" Dr. Henry B. Gwynn
August 27:	"Mind Over Matter" Dr. Henry B. Gwynn
September 3:	"Flies Are Dangerous" Dr. Fred A. J. Geier



LEND YOUR PRESENCE AND SUPPORT

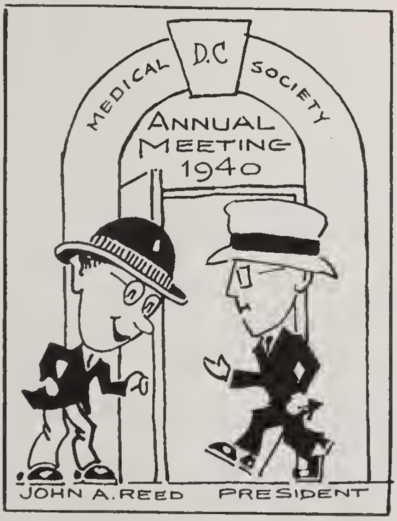
One year ago, when I was made President-elect of the Medical Society of the District of Columbia, there came to me as my first duty the selection of a General Chairman for the Annual Scientific Assembly. Thus my first official action became a reality when Dr. John A. Reed accepted the appointment to this most important post.

The Assembly, which begins on October 15, is the culmination of much energy, thought and work on the part of Dr. Reed and his Committee on Arrangements. Chairmen and members of all subcommittees long ago set the wheels in motion.

The Subcommittee on Program will present a scientific program that will justify the enthusiastic interest of our entire membership. The Scientific and Public Health Exhibits will be by far the finest which have ever been shown.

The Doctors' Hobby Show is an innovation worthy of support. It will demonstrate the talents and abilities of professional men, not necessarily associated with their scientific attainments.

The annual dinner, public meeting and luncheons will all be part of a meeting that will foster the advance of medical knowledge, promote closer associations and cement friendships.



Financial success of the Assembly was insured six months ago when the last space in the Technical Exhibit was taken.

The fall of the year is especially appropriate and appealing to begin the winter's work. It is the time when enthusiasm is at its highest pitch. This year it comes on the eve of the trial when we as a medical society will seek justice at court.

Honor the Committee on Arrangements of the Annual Scientific Assembly of our Medical Society by lending your presence and support. Your Society expects this of you.

Daniel Le Ray Borden

NEWS AND PERSONALS

The American Association for the Study of Neoplastic Diseases held its regular September meeting at the Mayflower Hotel, September 5, 6 and 7, 1940. The following subjects were presented by Society members:

"A Case of Breast Tumor," J. W. Lindsay, M.D., and E. Clarence Rice, M.D.
"Aspiration Biopsy—Abdominal (case reports)," J. W. Lindsay, M.D.
"The Nature and Pathogenesis of Multiple Adenomatosis of the Colon," Robert J. Coffey, M.D.
"Bone Lesion," Joseph F. Elward, M.D.
"Lesion of Bone," H. L. Claud, M.D., and M. A. Selinger, M.D.
"Tumor of the Thyroid Gland," Oscar B. Hunter, M.D.
"Post-auricular Tumor," George Tolstoi, M.D., and Oscar B. Hunter, M.D.
"Lesion of the Lungs," Oscar B. Hunter, M.D.
"Lesions of the Mediastinum," Ralph N. Caulk, M.D.
"Lesions of the Chest," Edgar Davis, M.D.
"Lesion of Bones," Lewis K. Sweet, M.D., and Harold R. Reed, M.D.
"Lesion of Bone—two cases," Watson W. Eldridge, M.D.
"The Revised Clinical Classification of Carcinoma of the Cervix," Edwin A. Merritt, M.D.

In response to requests made upon the **Speakers' Bureau, Dr. William F. Burdick** addressed the Home Hygiene Class of the American Red Cross, August 8 on the subject, "Skin Infections in Children." **Dr. Darrell C. Crain, Jr.** spoke before the same group August 29. His topic was, "Syphilis—Your Problem."

Dr. John Manley Orem has been appointed President of **Sibley Memorial Hospital,** it was announced on August 10, to succeed Dr. Lewis H. Taylor, who died March 30. Dr. Orem was at one time assistant to Dr. Taylor and has unofficially been filling the presidency since his death. He was graduated from George Washington University School of Medicine in 1930 and became an assistant to Dr. Adam Kemble. During the last several years Drs. Orem and Kemble have been associated in the practice of urology.

Colonel Norman L. McDiarmid, Medical Corps, U.S.A., has been appointed Superintendent of **Columbia Hospital for Women** to succeed Colonel Percy M. Ashburn, who died August 20. Colonel McDiarmid comes to Washington from Atlanta, Georgia.

Classes will begin at **George Washington University School of Medicine** on September 23. At 11:00 a.m. Dr. Charles Stanley White will deliver the opening lecture on the subject, "Medical Partnership."

The Georgetown University School of Medicine will begin its school year on September 23. With the opening of the new buildings at Gallinger Municipal Hospital teaching and laboratory facilities will be better than in the old ward building.

The Syphilis Journal Club will hold a meeting Friday, September 27, at the home of Dr. J. Francis Rogers, 3940 McKinley Street, N.W. At this meeting Dr. Henry H. Hazen will review briefly the progress of national serological surveys. Dr. George M. Leiby will discuss some interesting factors learned from his recent survey of the District of Columbia serological laboratories, which was sponsored by the Club.

The following officers have been elected for the ensuing year:

Dr. Henry H. Hazen, *Chairman*; Dr. George M. Leiby, *Vice Chairman*; Dr. George W. Creswell, *Secretary-Treasurer.*

CORRESPONDENCE

Washington, D. C.
August 14, 1940

To the Editor of the
Medical Annals of the District of Columbia:

My attention has been called to the contents of a paper on "The History of Blood Transfusion," written by Dr. J. Weinstein and myself. Our paper, which was published in the Medical Annals, Vol. VIII, No. 11, November 1939, contained excerpts from a paper on "Blood Transfusion," written by Dr. Michael DeBakey, without sufficient credit being given Dr. DeBakey.

The paper on "Blood Transfusion" by Dr. DeBakey and twelve other references were duly noted but quotation marks should have been used with several paragraphs taken from the excellent historical resumé by Dr. DeBakey. It was a regrettable omission for which I wish to assume entire responsibility.

(Signed) Chas. S. White, M.D.

PERCY M. ASHBURN, M.D., F.A.C.P., F.A.C.S.

(1872–1940)

Colonel Percy M. Ashburn, Medical Corps, U.S.A., retired, Superintendent of Columbia Hospital for Women, died August 20, 1940 at his home, 3930 Connecticut Avenue, N.W., following an illness of several months.

Col. Ashburn, who was born in Batavia, Ohio in 1872, received his degree in medicine from the Jefferson Medical College of Philadelphia in 1893. For a number of years he was Acting Assistant Surgeon in the Army, stationed in the Philippine Islands. In 1909 he was appointed member of a special commission to Liberia and at various times visited in Japan, China and the South Pacific Islands. Shortly after the beginning of the World War, Col. Ashburn organized and commanded the Medical Reserve Officers' Training Camp at Fort Benjamin Harrison, Indiana. He was sent to Switzerland as a member of the Mission for Prisoners of War in 1918. Upon completing this assignment Col. Ashburn came to Washington for duty in the Surgeon General's office. His last active duty in the Army was as librarian of the Surgeon General's Library. He was retired for disability in 1931 but continued in active service a year longer. He became Superintendent of Columbia Hospital for Women in 1934.

Col. Ashburn was the author of "Elements of Military Hygiene," "A History of the Medical Department of the United States Army," and an unpublished volume, "The Medical History of the Conquest of America." He had also contributed numerous scientific articles to medical journals.

Col. Ashburn held fellowships in the American Medical Association, the American College of Physicians and the American College of Surgeons.

Surviving him are his wife, Agnes Davis, and two children, Frank D. Ashburn of North Andover, Mass. and Mrs. Ann Virginia Rose of Washington.

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(*Continued from page 308*)

sonal knowledge of several cases treated in this fashion leads us to believe that success is not startling. Sulfathiazole is highly promising.

Of unusual interest in this case is the discovery on February 8 of an organism in the blood stream which gave a considerable amount of difficulty before it was diagnosed as Salmonella suipestifer. This infection may have dated back to the ingestion of pork sausage forwarded from the patient's country home the previous Christmas. These organisms remained in the circulation for several weeks and finally disappeared. No specific treatment was given for this.

Summary

The case report of a white male aged 25 years with staphylococcal cellulitis of the hand followed by staphylococcal septicemia and Salmonella suipestifer septicemia with multiple complications is reported. Treatment was successful and included specific antitoxin, blood transfusions and specific bacteriophage.

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MEDICAL ANNALS
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VOLUME IX OCTOBER, 1940 NUMBER 10

INCLUSION BLENNORRHEA IN PEDIATRIC PRACTICE*

SEYMOUR WILLIAM GIDDENS, M.D.
Toronto, Canada
AND
WILLIAM A. HOWARD, M.D.
Fellow in Pediatrics, Georgetown University School of Medicine

For a number of years there has been observed a purulent conjunctivitis in the newborn unassociated with any of the common pathogenic organisms such as the gonococcus, pneumococcus, streptococcus, Koch-Weeks bacillus, Morax-Axenfeld bacillus or diphtheria bacillus. Due largely to the comparatively recent work of Thygeson[1] this neonatal purulent conjunctivitis has been definitely established as a specific clinical entity and is known as "inclusion blennorrhea."

Inclusion blennorrhea may be defined as a condition occurring in infants between the ages of 5 and 10 days characterized clinically by an acute or subacute onset of edema, redness, swelling, and purulent discharge involving one or both eyes and unassociated with any systemic reaction. Pathologically there is a subepithelial infiltration of inflammatory cells, mostly plasma cells, with cytoplasmic inclusions in the superficial epithelium but no pathogenic bacteria.

HISTORICAL DATA

Morax[2] in 1903 was the first to recognize a purulent conjunctivitis in the newborn unassociated with any pathogenic bacteria. He termed such infection "amicrobienne." In 1907 Halberstaedter and Prowazek[3] found inclusion bodies in trachomatous conjunctivitis. Stargardt[4] soon afterward reported finding what he believed to be morphologically similar inclusions in the "amicrobienne" type of conjunctivitis. Schmeichler[5] and Heymann[6] confirmed this finding. However, Heymann also reported finding inclusions in 10 out of 14 cases of gonococcal conjunctivitis. The question then arose whether the cytoplasmic inclusions did not really represent the reactions of the cell to the gonococcus. It remained for Lindner to show the differences between gonorrheal ophthalmia and inclusion conjunctivitis. He pointed out that inclusion blennorrhea was transmitted to the Macacus rhesus monkey and the baboon,[7] whereas gonorrheal conjunctivitis was not.[8] In a large number of cases of conjunctivitis he found inclusion bodies regularly only four times simultaneously present with gonococci.[9] Therefore he suggested that any purulent conjunctivitis showing epithelial-cell inclusions be designated as "inclusion blennorrhea" (Einschluss blennorrhoe).

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* From the Department of Pediatrics, Georgetown University School of Medicine, and the medical wards of Children's Hospital, Washington, D. C.

In an attempt to elucidate on the etiology and source of this disease it was natural for the investigators to turn to the female genitourinary tract. Halberstaedter and Prowazek[10] examining scrapings from the urethra of two mothers of diseased infants found typical cytoplasmic inclusions in the epithelial cells. Heymann[11] confirmed this work. Lindner[12] also found inclusion bodies in nonspecific urethritis and, together with Fritsch and Hofstätter,[13] using urethral exudate of a case of a nongonococcal urethritis of 14 days' duration which contained typical inclusions, was able to transmit this infection to the conjunctiva of a baboon. They demonstrated typical cytoplasmic inclusions. Lindner[14] was of the opinion that inclusion blennorrhea and trachoma are manifestations of the same etiologic agent "which attacks essentially the genital epithelium but becomes adapted to the conjunctiva and causes inclusion blennorrhea. By successive passage from eye to eye, however, the agent undergoes an adaptation to the conjunctiva and thereby induces trachoma." He classified the two diseases as trachoma and paratrachoma.[15] This theory, however, has been disproved, since inclusion blennorrhea is easily transmitted to the monkey while trachoma is done so only with difficulty.

Etiology

Gebb,[16] using a Berkefeld filtrate of a saline suspension of inclusion blennorrhea exudate, was able to produce the disease in a human subject. There was typical conjunctivitis with cytoplasmic epithelial inclusions. He thus demonstrated the etiologic agent to be a filterable organism. This work has been confirmed by Botteri,[17] Thygeson,[1] Tilden and Gifford,[18] and Julianelle, Harrison and Lange.[19]

The most convincing work on the etiology of inclusion blennorrhea has been contributed by Thygeson.[1] He believed the origin of the disease is probably in the genital tract of the mother of the infected infant. He found cytoplasmic inclusions and free virus in preparations from the vaginae of 4 mothers of infants who had inclusion blennorrhea. The infectivity of 3 cases was demonstrated by successful inoculation and reproduction of the disease on the conjunctivae of 3 sphinx baboons, and also in the human. In his series of 11 cases none were complicated by superimposed infection, although later in the disease 2 of his cases showed pneumococci. He believed the etiologic agent to be a filterable virus having an elementary body phase and an initial body phase. When a Gram stain preparation is made of the secretion from an acute case of inclusion blennorrhea no bacteria are seen. However, when a Giemsa stain is done, minute, sharply defined, reddish-blue granules, the elementary bodies, are found within the polymorphonuclear leukocytes. Their average diameter is about 0.25 μ. They closely resemble the elementary bodies seen in other virus diseases such as psittacosis, vaccinia and fowl-pox. They are uniform in size and frequently diplococcal in form. A small number of larger coccobacillary bodies, the initial bodies, are also found intracellularly. They stain blue and bipolarly. Their average diameter varies from 0.3 μ to 0.8 μ. A typical smear will show all the transition stages between the elementary and initial body phases. These bodies are also found extracellularly and are most in the acute stage but can be demonstrated throughout most of the clinical course of the disease.

Thygeson believed "that the inclusion bodies are intracellular colonies of the virus in the various stages of development, the initial body being the early stage and the elementary body the late and infective stage." Lindner thought the initial body stage is the infective one. The cycle from elementary body to elementary body requires approximately 48 hours. On the basis of the following findings Thygeson concluded that the elementary and initial bodies constitute the etiologic agents of inclusion blennorrhea:

1. Constant presence in the disease.
2. Absence in conjunctivitis of known bacterial origin.
3. Absence of pathogenic bacteria in inclusion blennorrhea and failure of the occasional saprophytes to produce the disease when used for inoculation.
4. Multiplication of the elementary and initial bodies in the new host when the disease is transferred to the normal human conjunctiva.
5. Production of the disease with bacteria-free suspensions of elementary bodies.
6. Noninfectiousness of filtrates not containing elementary bodies.

Julianelle, Harrison and Lange admitted that there is little doubt that the inclusion is an actual phase of the infection, but they stated that this does not supply conclusive proof that the inclusion and the infectious agent are one and the same. They, like other investigators, suggested that perhaps the inclusion bodies may represent an intracellular product of reaction or degeneration.

Glover[20] reported a series of cases of conjunctivitis of the "amicrobienne" type occurring in the neonatal period which he believed were due to the action of stale silver nitrate solutions used in Credé prophylaxis. The clinical description is identical with that of inclusion blennorrhea. Bacteriologic data were incomplete and Giemsa stains were not done. The course of the infection suggests that they were actually cases of inclusion blennorrhea.

PATHOLOGY

Thygeson[1] reported the pathologic findings in a biopsy specimen from the upper fornix of the conjunctiva done on the forty-third day of the disease. He found the epithelium to be infiltrated with polymorphonuclear leukocytes, and in the superficial layers an occasional epithelial-cell inclusion body could be seen. The subepithelial layer was densely infiltrated with inflammatory cells with the plasma cell predominating. No follicle formation was noted.

Braley[21] after studying biopsy specimens from the lower fornix and the retrotarsal fold of 8 cases of inclusion blennorrhea and also specimens from the cervix of 6 mothers of these infected infants concluded that:

"1. The inclusion bodies of inclusion blennorrhea can be demonstrated in fixed tissue of the cervix.
2. The type of epithelium containing the bodies is the same in the cervix and the conjunctiva.
3. The inclusions occur almost exclusively in the large polygonal 'wing' cells just above the basal layer.
4. Hyperplasia, hypertrophy, and desquamation of the epithelium are the predominant histological changes in the virus infected tissues.
5. The subepithelial infiltrate of the inflammatory cells is nonspecific.
6. Disintegration of follicles and scarring do not occur."

Hamburger[22] concluded that the virus is usually present in the vagina and external genitalia and only infrequently in the cervix. Thygeson and Mengert,[23] however, stated that the virus localizes in the cervix.

Wolfrum[24] found extensive epithelial destruction in severe cases of inclusion blennorrhea. In these areas few or no inclusion bodies could be seen, whereas in the less destroyed areas where the epithelium was still preserved to a certain extent the inclusion bodies were more numerous. The subepithelial tissue was markedly invaded mostly by plasma cells and some leukocytes. No follicles were seen, but in a later case he did report the presence of follicle formation.

The inflammatory process thus first affects the epithelial layers of the tunica propria, destroying large areas of epithelium. Then it spreads to involve the subepithelial tissue. There is an inflammatory infiltration of both layers, mostly by plasma cells.

If the disease is of sufficiently long duration, repair of the epithelium sets in and is characterized by the infiltration of histiocytes and lymphocytes which tend to form follicles. The number of these are, however, much less than in trachoma.

EPIDEMIOLOGY

Inclusion blennorrhea is not an uncommon disease, but it frequently goes undiagnosed even by the ophthalmologist. It is supposed to be widely disseminated. Howard[25] reported 10 per cent to 20 per cent of all cases of purulent conjunctivitis in the newborn to be due to inclusion blennorrhea. Julianelle and Lange, in their clinics, found only 22 cases over a 5-year period. At Children's Hospital in Washington, D. C., we have seen at least 21 bona fide cases on the free wards in the past 2 years since we first began to diagnose this disease. There were undoubtedly a number of other cases which we cannot include in this report because of inadequate work-up, but a review of available data indicated that patients diagnosed as having nonspecific conjunctivitis probably had inclusion blennorrhea.

Ten of 14 of Lumbroso's cases were females. In Julianelle and Lange's series of 22 cases 15 were females. Eleven of our 21 cases were females. It is interesting to note that 13 of our cases were colored and that 8 of these were females, whereas 3 of the 8 white patients were females. Julianelle and Lange reported 7 of their 22 cases to be colored. Thygeson[1] also reported 3 cases in colored infants. The disease is apparently just as severe in colored infants as in white, although the colored race has been observed to be less susceptible to trachoma. No great seasonal predominance is observed. The disease seems to be of perennial occurrence.

Hamburger[22] observed inclusion blennorrhea in 2 children of one family. Julianelle and Lange[29] also reported the occurrence of inclusion blennorrhea during the neonatal period in the brother of 1 of their patients. Howard[25] reported the disease in 1 of twins, the other twin remaining entirely normal. Cases have been reported in which the mother had been infected from her infant, and nurses and doctors from patients.[23] Cases have not been reported in which the infection had been spread from one infant to another. This may be due to the low-grade infectivity of the disease or the specific age-period in which the disease occurs, permitting successful isolation of the patient. It has been our practice in the hospital, once the diagnosis is made, to leave these patients in the cubicle and not transfer them to the isolation ward, although we carry out the usual isolation technic.

No permanent local or general immunity results from this infection.[26] Reinfection can be readily obtained in experimental animals. No neutralizing antibodies or agglutinins can be demonstrated in the blood of infected individuals.

CLINICAL SIGNS AND SYMPTOMS

The incubation period of inclusion blennorrhea varies from 4 to 10 days, averaging 7 days. The appearance of this condition is always later than the customary onset of gonorrheal conjunctivitis. The disease may begin acutely or subacutely, and some investigators report a prodromal stage of hyperemia and catarrhal inflammation of the conjunctiva. Acute cases are thought to develop earlier. The onset is usually in one eye, and while it may remain monocular, it generally spreads to involve both eyes. Fever and constitutional symptoms are absent, although a mild and persistent rhinitis has been observed by some investigators.

In some instances the disease may be quite mild. Here the initial manifestations are a moderate injection of the conjunctivae with a small amount of purulent discharge. In the more severe cases there is intense edema, swelling and redness of the lids. The eyes are shut tight and blepharospasm is marked. A marked purulent discharge is present. The exudate consists of leukocytes with occasional lymphocytes, monocytes and desquamated epithelial cells. Eversion of the lids shows the conjunctiva to be markedly edematous and inflamed, especially so in the fornices and in the lower tarsal areas. As a rule the reaction in the upper lids is not as marked. Follicle formation is not present in the acute stage, but papillary conjunctivitis is common.

The presence of pseudomembranous exudate has been reported by several writers. It is usually associated with a severe type of infection. Four of our cases had a diphtheritic-like membranous exudate. In 1 it was severe enough to warrant the administration of diphtheria antitoxin before the secondary invader was identified as B. xerosis.

Course, Prognosis and Sequelae

The acute stage may persist up to three weeks but usually lasts one to two weeks with or without treatment. It merges gradually into the subacute and chronic stages. During this time the edema, redness and discharge gradually lessen and the inclusions become more and more difficult to detect. However, the conjunctiva may continue to present a beefy appearance for a number of months up to a year. The papillary hypertrophy becomes less prominent and may give rise to pinhead-sized follicles. There is no pannus formation or corneal involvement. Lindner,[8] Aust,[27] and Lumbroso[28] noticed some mild superficial scarring in some of their cases. Aust states that this scarring is observed only in those cases which show a pseudomembrane, and he attributes this to the intense inflammation in these cases rather than to the cicatrizing action of the causative agent. However, Julianelle and Lange,[29] Thygeson,[30] and Noguchi and Cohen[31] could not corroborate this finding in their cases with pseudomembranous exudate. None of our 4 cases with pseudomembranes showed any complications.

The prognosis is good. Usually there are no recurrences or exacerbations. Julianelle and Lange[29] reported exacerbations in 3 of their 22 cases. Lumbroso[28] noticed a recrudescence in 7 of his 14 cases.

Diagnosis

The diagnosis of inclusion blennorrhea is not difficult. There is almost always a history of Credé prophylaxis. About 5 or 7 days after birth there is an acute onset of swelling and redness of one or both eyes, more marked in the lower tarsal region. This is soon followed by a profuse purulent discharge. The disease is almost always bilateral. The diagnosis is definitely made by the finding of inclusion bodies in Giemsa-stained scrapings from the conjunctiva.

The technic is as follows: The eye is first gently irrigated with normal saline. The lids are everted and gently rubbed with sterile gauze. (Local anesthesia may be used but is not necessary.) The most congested area is then scraped with a platinum loop barely drawing blood. This is then evenly smeared over a glass slide and fixed by passing through methyl alcohol and drying. The slide is kept in Giemsa-stain solution for 20 minutes in a perpendicular position to prevent precipitation. It is then removed and washed with water and then passed through two washes of 5 seconds each in 95 per cent alcohol. This decolorizes the acidophilic and neutrophilic granules in the cells, thus making the inclusion bodies which are alcohol fast, stand out more clearly. The initial bodies are dark blue, and the elementary bodies appear as clusters of a lighter, brilliant blue. Both may be found throughout the cytoplasm of the epithelial cells.

Cultures made of the exudate are either sterile or show only the nonpathogenic bacteria which may be normally found in the conjunctiva, the

TABLE 1

Summary of clinical course of five cases of inclusion blennorrhea treated with sulfanilamide and sulfapyridine at Children's Hospital, Washington, D. C.

CASE	RACE AND SEX	AGE AT ONSET	AGE WHEN SEEN	CLINICAL FINDINGS	SMEAR	CULTURE	INCLUSION BODIES	CORNEAL INVOLVEMENT	PREVIOUS TREATMENT	PRESENT TREATMENT	PROGRESS
		days	*days*								
1	White Male	7	14	Acute onset. Bilateral profuse yellowish purulent discharge from eyes. Upper and lower lids swollen. Eyes shut tight. Father's Wassermann positive, patient's negative. Admitted March 21, 1939; discharged March 28, 1939	Neg.	Neg.	Pos.	None	None	Boric acid compresses and irrigations. 1% mercurochrome. Sulfanilamide and soda $\overline{aa}$ gr. 1 q.i.d. (March 21 and 22), gr. 1 t.i.d. (March 23 to 26). (Wt. 6 lb., 1 oz.)	March 22—Improved. Discharge considerably decreased. Edema subsiding. Hemoglobin 77%; R.B.C. 3,990,000; W.B.C. 6,300. March 26—Very little discharge. Edema gone. Slight sulfanilamide rash. March 28—Eyes apparently normal. Discharged. April 4—Conjunctival sacs still free of pus. Nov. 24—Eyes normal. Smear negative
2	Colored Male	5	10	Acute onset. Bilateral. Moderate amount of purulent yellowish discharge. Some swelling of lids. Conjunctivae markedly swollen and beefy looking. Admitted May 15, 1939; discharged May 30, 1939	Neg.	Neg.	Pos.	None	None	Boric acid irrigations. Cold compresses. 2% mercurochrome. Sulfanilamide and soda $\overline{aa}$ gr. 1 q.i.d. (May 20 and 21), gr. 1 t.i.d. (May 22 to 26). (Wt. 6 lb., 12 oz.)	May 22—Hemoglobin 95%; R.B.C. 5,690,000; W.B.C. 10,900. May 24—Eyes much improved. May 25—Very slight or no discharge. May 30—Conjunctiva hyperemic. No discharge. Smear negative for inclusions. Discharged. June 2—Conjunctivae practically normal
3	Colored Female	9	10	Acute onset. Bilateral. Considerable amount of purulent discharge from both eyes; lids edematous and shut. Conjunctiva markedly inflamed. Discharge pseudomembranous in type. Rhinitis present. Vaginal smear negative for gonococci. Admitted Aug. 7, 1939; discharged Aug. 23, 1939	Neg.	Neg.	Pos.	None	Boric acid irrigations	Boric acid compresses and irrigations. 20% argyrol drops. Sulfanilamide and soda $\overline{aa}$ gr. 1 q. 4 hours (Aug. 7 to 19)	Aug. 8—Hemoglobin 95%; R.B.C. 4,900,000; W.B.C. 9,600. Aug. 13—Edema considerably decreased. Aug. 15—Discharge very much less. Aug. 16—Practically no discharge; conjunctivae still injected. Aug. 19—Hemoglobin 71%; R.B.C. 3,570,000; W.B.C. 15,000. Aug. 23—No discharge. Very slight injection of conjunctivae. Discharged from hospital. Sept. 5—No discharge. Eyes quiet. Sept. 12—Doing fine. Discharged as cured

4	Colored Male	8	11	Acute onset. Bilateral. Discharge creamy white. Lids of both eyes markedly swollen, more marked in the upper ones. Conjunctivae intensely red and swollen. In the O.D. the injection extends almost to limbus on medial side. Eyes shut tight. Definite pseudomembrane present in both eyes. Admitted Nov. 24, 1939; discharged Dec. 3, 1939	Neg.	Neg.	Pos.	None	Boric acid irrigations and argyrol	Normal saline irrigations and compresses. Sulfanilamide grain 1 q. 4 hours (Nov. 24 to 29). Sulfanilamide and soda $\overline{aa}$ gr. 1 q. 6 hours (Nov. 29 to Dec. 1). (Wt. 7 lb., 13 oz.)	Nov. 25—Hemoglobin 86%; W.B.C. 9,700. Edema and discharge markedly reduced. Nov. 26—Eyes kept open. Edema and discharge decreasing further. Some injection of bulbar conjunctiva O.D. still present. Nov. 27—Edema practically all gone. Conjunctivae of lids still injected. Small amount of discharge present, especially in O.D. Smears for inclusion positive. Nov. 27—Hemoglobin 80%; R.B.C. 3,580,000; W.B.C. 10,600. Nov. 29—Keeps eyes quite open. No discharge but conjunctivae still mildly injected, especially in O.D. Smears for inclusions negative. Dec. 3—Eyes normal. Discharged as cured
5	Colored Male	7	18	Acute onset. Bilateral. Marked thick creamy yellow discharge. Lids moderately swollen. Conjunctivae beefy red and of granulomatous appearance. Admitted Dec. 8, 1939; discharged Dec. 18, 1939	Neg.	Staph. albus	Pos.	None	Argyrol drops and boric acid irrigations	Normal saline irrigations and compresses (Feb. 8 to 10). Sulfapyridine gr. 1 q. 4 hours (Feb. 8 to 11); gr. 1 q. 5 hours (Feb. 12); gr. 1 q. 6 hours (Feb. 13 to 15); total amount 37 grains. (Wt. 6 lb., 4 oz. on admission; 7 lb., 3 oz. on discharge)	Dec. 8—Hemoglobin 65%; W.B.C. 12,700. Dec. 10—Discharge considerably decreased. None in O.D. Very slight amount at lid margins in O.S. Injection of conjunctivae decreasing. Edema all gone. Keeps eyes open. Hemoglobin 68%; R.B.C. 3,480,000; W.B.C. 8,400. Smear for inclusions O.S.—positive, O.D.—negative. Dec. 12—No discharge noted. Conjunctivae almost normal. Dec. 13—Very slight discharge at lid margins O.S. Conjunctivae almost normal. Smear for inclusions negative. Blood sulfapyridine determination less than 1 mg. per 100 c.c. blood. Urine examination essentially normal. Dec. 14—No discharge. Eyes open. Dec. 18—No discharge. Eyes appear normal. Smears for inclusions negative

nonhemolytic staphylococci and diphtheroid bacilli. However, a double or secondary infection may occasionally occur. In these cases appropriate treatment will clear up the latter, but the inclusion blennorrhea will persist and follow its usual chronic course. Gonorrheal ophthalmia can be ruled out by the history of contact, the shorter incubation period and the presence of gonococci on smear and culture. The mild irritative chemical conjunctivitis can easily be recognized by its occurrence in the first two or three days of life and by the absence of inclusion bodies or pathogenic bacteria from eye smears and cultures. Inclusion blennorrhea should be suspected in any neonatal purulent conjunctivitis when repeated smears and cultures fail to show any pathogenic microörganisms.

Treatment

It has been our practice to isolate all infants admitted with purulent conjunctivitis until a diagnosis is definitely established. This procedure is also followed in cases discovered in obstetrical wards. Once the diagnosis of inclusion blennorrhea is made the patient can be treated in the regular wards using cubicle technic. Smears and cultures should be taken for predominating organisms as well as conjunctival scrapings from each eye for inclusion bodies. Pending an accurate bacteriologic diagnosis, the conjunctivitis is generally treated as though it were gonorrheal in origin. If a diagnosis of inclusion blennorrhea is made, therapy should be modified considerably, since drastic local therapy is not indicated in this condition. In fact, too active local treatment will often aggravate the condition. Until recently all methods of treatment were simply symptomatic. During the acute stage cold boric acid compresses are applied to the eyes as often as every two or three hours for ten minutes at a time in order to reduce the edema. The conjunctival sacs are kept free of pus by hourly irrigations with warm boric acid solution. One or two drops of a 1 per cent aqueous solution of mercurochrome was instilled into the conjunctival sacs three or four times a day following irrigations. The purpose of this mild antiseptic is simply to prevent secondary infection. Argyrol (10 to 20 per cent) or metaphen (1:2500 solution) or other mild antiseptic may be used instead. All trauma to the conjunctiva should be avoided. Grattage is not recommended.

As soon as improvement is noted, as judged by the diminution of swelling and redness of the lids, the eye compresses are discontinued. The irrigations are decreased to three or four times a day. The mercurochrome instillations are continued two or three times daily. This regimen is kept up for six to eight weeks at home with gradually decreasing frequency of irrigations and mercurochrome instillation. At the end of this time the eyes will look almost normal, or there may still be some injection of the conjunctiva with slight crusting at the inner canthi and along the lid margins. This will then persist until the termination of the disease.

Toward the latter part of this study, sulfanilamide was used as an adjunct to the local treatment of inclusion blennorrhea. This was suggested in personal communications to the authors by Thygeson[32] and Allen[33] who had already used the drug with considerable success. Preliminary reports by these authors have recently been published.

Thygeson[34] gave $\frac{1}{2}$ grain of sulfanilamide per pound of body weight daily to 2 of 4 Macacus rhesus monkeys who had experimental inclusion blennorrhea. This resulted in complete healing of the disease in two weeks, whereas no change in the conjunctivae was noted in the 2 control animals.

One infant was treated in a similar manner. This baby was given the drug for 7 days. Smears taken on the second day of treatment failed to show any inclusions. Cessation of discharge was noted on the fifth day, and after two weeks the eyes were entirely normal. A 34-year-old woman with inclusion blennorrhea was given 30 grains of sulfanilamide daily for 21 days, with complete healing.

In this series 4 patients were given sulfanilamide as an adjuvant to local therapy. In all the duration of the disease was considerably lessened. Within 48 to 72 hours there was a marked change in the appearance of the eyes. The average dose used was $\frac{3}{4}$ grain per pound of body weight. Details of the individual cases are shown in table 1. In only one instance (case 1) was any reaction to sulfanilamide noted, this infant showing a transient sulfanilamide rash. Blood counts at frequent intervals failed to show any significant changes. In 2 cases the smears became negative in 1 week, and in all 4 cases clinical improvement was equally marked. The long-drawn-out local treatment, keeping the eyes cleansed with the boric acid and instilling antiseptics, is unnecessary with the addition of sulfanilamide to the treatment routine (cases 4 and 5).

The last case in the series presented here was treated with Dagenan (sulfapyridine). The dose used was 1 grain per pound of body weight with a total administration of 37 grains spread over a period of 1 week. Smears for inclusion bodies from the right eye became negative in 2 days and from the left eye in 4 days. At this time the blood sulfapyridine concentration was less than one milligram per 100 c.c. of blood. No local antiseptics were used. The eye irrigations of boric acid solution were substituted with normal saline solution. From the clinical observation of this case it would seem that sulfapyridine is perhaps more efficacious in the treatment of inclusion blennorrhea than sulfanilamide.

SUMMARY

1. Inclusion blennorrhea is a specific disease entity. It is a neonatal purulent conjunctivitis occurring between the ages of 5 and 10 days.

2. The etiologic agent is a filterable virus acquired by the infant from its mother during its passage through the birth canal, since specific cytoplasmic inclusions have been demonstrated in smears from the genital tract of the mothers of infected infants.

3. The diagnosis, which may be suspected from the history, can be definitely established only by finding inclusion bodies in conjunctival scrapings stained by the Giemsa method.

4. The disease is self-limited but may last several months. The prognosis is good and there are no complications or sequelae.

5. Heretofore, treatment has been largely symptomatic, but recently the use of sulfanilamide has markedly decreased the duration of the disease. Twenty-one cases of inclusion blennorrhea are reported. Four have been treated with sulfanilamide and 1 with Dagenan (sulfapyridine).

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(Continued on page 368)

PRENATAL CARE*

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The object of prenatal care is not only to guard the prospective mother against complications which may arise during pregnancy, but also to attempt to prepare her for the bodily stress which labor entails. Long before physical preparation for labor was considered to be necessary, young men were not allowed to play football unless they were conditioned by rigorous exercise and strict training rules of diet and rest. The woman who is about to have a baby deserves at least as much consideration as does an athlete. Prenatal care is not adequate unless as a result of examinations, advice and treatment, the patient arrives at the end of pregnancy in the soundest possible physical condition.

When a woman first presents herself for obstetrical care, it is obvious that the physician should make every effort to learn what she possesses in the way of physical equipment necessary for childbearing. Early detection of defects and weaknesses allows months for their correction. Fortunately, it has become the rather general custom for patients to report to the physician early in pregnancy.

The first visit is the time to begin to gain that confidence which is so desirable if not actually necessary for the full coöperation of the patient during pregnancy and labor. A detailed history should be taken in an unhurried manner with sympathetic interest shown in even the most unimportant bits of information offered by the patient. To most women going to an obstetrician for the first time, vaginal examination is a dreaded ordeal. After the examination has been made with utmost dignity and gentleness, the patient is usually amazed to discover that the procedure is not the terrible experience which she had anticipated. One more barrier to confidence has been cleared, and at the same time the doctor has learned the size, shape, consistency and position of the pelvic organs. After the examination the patient should be given instruction as to her conduct during pregnancy, and she should be told that at any time should anything occur which frightens her or which she does not understand, should any disturbing questions arise, she must feel free to call the doctor. The realization that the physician is always ready and anxious to be of service is extremely comforting.

At an early subsequent visit, a complete physical examination is in order. Examination of the eyegrounds, sinuses, teeth and ears will often reveal foci of infection and will also give basic information for comparison should complications arise. The heart, lungs, breasts and general condition of the entire body should be investigated, and external pelvic measurements should be made.

To complete the physical picture, a urinalysis, a Wassermann and a hemogram must be made, and a determination of the basal metabolic rate is desirable. The value of routine basal metabolic tests in the absence of symptoms is perhaps open to question. Frequently, however, during the latter part of pregnancy it seems advisable to prescribe thyroid extract. A record of the metabolic rate before it was affected by pregnancy is a guide to dosage. When the test is made during the latter half of pregnancy it must be remembered that it is the combined metabolism of mother and fetus which is being measured, and 10 or 15 per cent should be subtracted from the result in order to obtain the maternal rate.

During the first three months of pregnancy, before the placenta has been fully formed and well attached to the uterine wall, moderation, with abstinence during the missed periods, is advised in many activities which later may be indulged in with impunity. Dancing, swimming, motoring and coitus are in this category. After the third month dancing is allowed with the stipulation that every other dance shall be "sat out." Although swimming has been forbidden by many physicians, in twenty years no harm has come to pregnant women who have been advised to swim whenever possible, but with warning against overexertion and bathing in heavy surf. No form of exercise brings more muscles into play, and no form of sport calls for costumes which expose so much body area to the beneficial effects of sunlight.

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Motoring, either as passenger or driver, may be allowed without restriction provided that at least five minutes of every hour shall be spent out of the car, moving about. This helps prevent pelvic congestion by stimulating circulation, and breaks the rhythmic jarring of the uterus caused by vibration of the moving car. Travel by train or by air may be permitted without limit until the last month of pregnancy.

Because of the danger of inducing abortion during the first three months and of introducing infection during the last month, coitus is forbidden at these periods of pregnancy. At other times, when practiced in moderation, no ill effects are to be expected.

Strenuous sports, such as horseback riding, cycling, tennis, bowling, etc., should be avoided, but playing nine holes of golf on a flat course seems to provide a safe and desirable form of exercise.

Many women object to wearing low-heeled shoes. When, however, it is explained that as the center of gravity of the body is carried forward by the growing uterus the muscles of the back must be put to extra strain in order to maintain the erect position, the patient usually realizes that if she is propped up on high heels this effect is doubled, and she becomes resigned to Cuban heels in order to save possible years of backache following childbirth.

A well designed and properly fitted maternity girdle, by preventing overstretching of the abdominal muscles and by protecting the sacroiliac joints not only prevents much backache but also lessens the occurrence of lower abdominal discomfort during the last four months of pregnancy. The most potent argument in persuading women to wear maternity corsets is that if their abdominal walls are not overstretched, they will be more likely to regain their former figures. The corset also furnishes support for stockings, thereby eliminating round garters as a possible cause of varicose veins. A brassiere of the "uplift" type will add to the comfort of the patient and will do much toward the prevention of sagging breasts after lactation has ceased. Application of agents such as alcohol and alum for the purpose of toughening the nipples, if it has any effect, results only in making the skin brittle. Attempts to soften the skin by massage with ointments may cause irritation and inflammation. The only attention to the nipples which is required is that they be kept clean with soap and water.

During the past ten years, smoking by women has become so prevalent that probably 80 per cent of obstetrical patients must be advised as to the effects of the habit. It has been shown that smoking increases the fetal heart rate[1] and that nicotine is excreted in breast milk.[2] Theoretically, women should not smoke during pregnancy, but in so many cases, when in spite of advice to the contrary patients have smoked excessively, no ill effects on mother or child were noted; thus it is debatable as to which is more harmful, the use of tobacco or the nervous reaction to stopping its use. Campbell[3] after much investigation of the subject concludes that 6 cigarettes a day are harmless, 20 or more are always harmful, and that between the two figures the likelihood of harm varies with the individual. It seems wise, therefore, to attempt to limit smoking to not more than 6 cigarettes a day. Alcohol, theoretically, should be forbidden. Actually, however, no harm seems to follow an occasional cocktail or glass of wine. More than two drinks on any one occasion should not be allowed.

The pregnant woman needs at least 8 glasses of fluid each day. In normal cases the diet should be varied, should provide meat, at least two green vegetables, and a moderate amount of carbohydrates. Unless unfavorable symptoms occur appetite and desire are usually reliable guides as to the quantity and selection of food. It has been shown that diet has no appreciable effect upon the size of the offspring, and unless certain foods are taken in excess it has little to do with overweight of the mother.

Increase in weight during pregnancy is probably less a matter of diet than of endocrine disturbance or of the occult edema of beginning toxemia. Drastic dietary restrictions may deprive mother and fetus of necessary food elements. The balancing of fluid intake and output, with the restriction of salt consumption, will be found to control weight when it is caused by edema. Arnold[4] of Dallas, in an attempt to control fetal weight by the administration of thyroid extract to the mother, found that the average maternal gain in weight was 18.2 pounds. As the metabolic rate is normally high during the last trimester, he disregards the test and gives thyroid until a rapid pulse suggests that the limit of tolerance has been passed. Excellent results have been obtained in cases of rapid gain of weight by giving 3 grains of desiccated thyroid daily until an increase in pulse rate is noted, balancing fluids and forbidding the addition of salt to food at the table. The only dietary restriction is moderation in the use, first of fats and second of carbohydrates.

During the latter half of pregnancy it is essential that the supply of calcium be adequate. The demands of the growing fetus exceed the amount furnished by ordinary diet, and unless the calcium intake is augmented the reserve supply which is stored in the bones and teeth may be depleted with damage to those structures. One quart of milk per day, which contains approximately 1 gram of calcium, should be sufficient. Many patients find it difficult to drink a quart of milk a day; some dislike the taste, some feel that it causes indigestion or constipation, others fear excessive gain in weight. Calcium can be easily supplied in the form of tablets, and when prescribed as a medicine with explicit instructions as to its use, patients seldom object to taking it.

The symptoms of calcium deficiency are definite. They are, in order of frequency, fatigue, systolic blood pressure of 100 or lower, cramps in the calves of the legs and generalized itching of the skin. After one or two weeks of treatment, in practically every case, the patient feels stronger, the blood pressure will be raised 10 or more points, the cramps and itching will have disappeared.

The calcium salt which is most readily assimilated is the gluconate, although the lactate is nearly as effective. This has been proved clinically by treating numerous patients with calcium gluconate until all deficiency symptoms had disappeared, and then changing to dicalcium phosphate. With practically no exceptions, within one week the fatigue, cramps and low blood pressure began to return, and were again relieved by resuming the gluconate.

By the end of the fifth month, or sooner if symptoms occur, calcium gluconate, 1.5 grams 3 times a day, should be prescribed. In order to promote absorption of the calcium from the intestine, Vitamin D should always be given. A capsule containing Vitamins A, B and D, taken with each dose of calcium, seems to be sufficient. To obtain the maximum benefit calcium should be taken well diluted, when the stomach contains no food, and nothing should be eaten until one-half hour later.[5] The directions to the patient are to chew the tablet, place a vitamin capsule in the mouth, and drink a glass of water or fruit juice one-half hour before luncheon, dinner and at bedtime. Milk should not be used as a diluent, as it delays absorption of the gluconate.

"Thyroid is an excellent substance for increasing the rate of calcium absorption."[6] When the deficiency symptoms are relieved but not entirely eliminated by calcium and Vitamin D, desiccated thyroid, $\frac{1}{2}$ grain, taken 3 times daily, will usually complete the cure.

Unreported clinical observations by a pediatrician[7] of a parallel series of 100 babies whose mothers had been given calcium during pregnancy and 100 who had not, showed that the former group were markedly superior in gain of weight, resistance to infection and in general health. Treatment to the mother, therefore, is also beneficial to the fetus. It has been feared that maternal ingestion of calcium might cause overcalcification of the baby's bones, especially of the skull. Theoretically, this should not occur, and no such results have been noted clinically.

At the end of the seventh month of pregnancy, and again at the end of the eighth, the amount of hemoglobin should be determined. If the percentage is found to be below 80, iron, preferably in the form of ferrous sulphate, will usually correct the deficiency. Should caesarean section be contemplated, typing and cross-matching with a prospective donor may be a lifesaving precaution.

Examination of the urine and blood pressure at least once a month until the last two months and then once a week should provide sufficient opportunity for the early detection of toxemia. For the convenience of the patient, and to prevent contamination of urine by sugar in improperly cleaned cough-sirup bottles or albumin from cream jars, an excellent plan is to give to the patient as she leaves the office a clean bottle wrapped in paper, which may easily be carried in a handbag.

Occasional measuring of the growth of the uterus and counting the fetal heart beat and an estimation of the internal pelvic measurements complete a program which would seem to include every possible means of safeguarding the mother and child and of assuring unimpaired future health for both.

1835 Eye Street, N. W.

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Legitimate uses of marihuana add to problem of its control. The control of the highly dangerous use of marihuana as a drug is made difficult by the fact that there is a large variety of legitimate industrial uses for this plant, S. R. Winters, Washington, D. C., points out in the October issue of *Hygeia, The Health Magazine*.

The fibers of the plant, which is often referred to as hemp, are used legitimately by industries to manufacture rope, twines, hats and paper. "The plant's long fibers are also used to make textiles and plastics," the author says, "but when the stalk is cut before the plant reaches maturity, little or no resin, from which the narcotic substance is made, has been able to develop. The seeds of the plant are used for bird foods; the oils obtained from the seeds are used in the preparation of pharmacal emulsions, paints, varnishes, soap and linoleum. The residue of the hempseed, after pressing, is used for both a livestock feed and a fertilizer.

"The variable potency and unpredictable effects of marihuana seriously limit its use for medical purposes, and physicians are generally agreed that it has no value in treatment which cannot be better replaced by other, more reliable drugs; its use as a relief for neuralgia and as an aid in psychoanalysis is questionable."

While the abuse of marihuana by young people is probably not as prevalent as many accounts would indicate, the peculiar susceptibility of adolescents to the practice of smoking cigarets and the relatively low price of marihuana make this drug a menace to youth. Statistics show that most devotees are found in age groups under 30 and that they have begun the habit by smoking.

"According to Moreau de Tours (1845)," Mr. Winters reports, "some of the psychic reactions of marihuana are: intellectual excitement, dissociation of ideas; overexcitation and exaggeration of sensations; errors in judging time and space; fixation of ideas having suggestive origin in the outside world; emotional disturbances during which the addict loses self control and may commit acts of violence; irresistible impulses, always of a suggestive origin, which may lead to suicide, and numerous illusions and hallucinations.

"The habit of drugs and crime go hand in hand. Prolonged use of large quantities of marihuana by habitues or a single large dose taken by the novice may cause criminally maniacal acts. Marihuana, frequently used by criminals to bolster courage, creates time and space illusions and destroys judgment of speed and distance."

FAILURES AND RECURRENCES FOLLOWING ESTROGEN TREATMENT OF GONORRHEAL VULVOVAGINITIS

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The basis of treatment of gonorrheal vulvovaginitis with the estrogens has been assumed to be the ability of these substances to create a temporary maturity environment in the vagina of the child, thus rendering it resistant to pathogenic bacteria. The estrogens also produce a similar maturity environment in the uterus and tubes. Included in this development is the cervix with its glands. Zondek[1] states that "the cervical glands react to estrogen with marked enlargement." The cervix is the "keystone" or "tonsil" of the genital tract, the cervical glands being the weak focal point. When infected, these glands serve as the fountainhead focus. During prepubescence the production of natural estrogens is accelerated. This now weakened barrier, in the presence of potent gonococci, allows the extension of the infection from the lower to the upper genital tract, resulting in a gonorrheal infection which resembles that occurring in adults. This is probably the reason for the development of the occasional gonorrheal salpingitis and peritonitis that is seen.[2] It is well known that the onset of menses facilitates the spread of lower genital tract infection to the upper genital tract when the process is relatively acute. The later in childhood that the infection is acquired the more likely it is to spread to the upper genital tract.

A rather disappointing number of cases of gonorrheal vulvovaginitis treated with estrogens alone show recurrences within a short period after apparent cure. Jacoby[3] reported from a careful study in the Social Hygiene Clinics of the Health Department of New York City that after using 1,000 international units of estrogen intravaginally nightly in children from the ages of 3 months to 14 years, 15 per cent failed to be cured, 22 per cent had relapses, and only 63 per cent were permanently cured after treatment from 3½ to 5 months. This period of treatment is as long as is necessary with the nonantiseptic method—creation of local reaction and drainage.[4] The percentage of failures and recurrences is a good deal higher than with the nonantiseptic method. Poor results from the estrogen treatment have also been reported by Phillips,[5] Nabarro,[6] Wrana,[7] Witherspoon[8] and Wilde.[9]

TeLinde[10] stated that he had "little doubt that the vaginal portion of the cervix is involved with the vagina," but that he had "seen no evidence of an endocervicitis comparable to that of the adult." According to Lewis,[11] gonorrhea of girls differs widely from the same disease in women, infection of the gland-bearing area of the cervix being rare or nonexistent. He stated further that treatment of the endocervix is not indicated and is dangerous.

Unquestionably there is frequent involvement of the cervix in juvenile gonorrhea of females, and the older the child (usually above the age of 6 years) the more the similarity to that of the adult type of infection. The following case report offers proof of this principle. It is typical of many similar cases. Furthermore, juvenile gonorrhea is best treated upon the same basic principles as is adult gonorrhea, namely, creation of local reaction and drainage.

M. F. W., a white female, 12 years of age, whose father has had 2 severe attacks of gonorrhea, has herself had juvenile gonorrhea of her genitals during the past 9 years (since the age of 3 years). She has been treated by 6 physicians with irrigations and instillations of the following materials: hexylresorcinol, argyrol, mercurochrome, sulfanilamide, silver nitrate and glucose solution; and she has also had a 14-week course of estrone injections (28,000 international units). A mucopurulent discharge was noted frequently, coming of course from the gland-bearing area of the cervix. Appendectomy was performed at the age of 11 years, but the attending physician felt that the appendix did not appear particularly diseased. The patient had had previous attacks of abdominal pain, and it is likely that she had transient gonorrheal peritonitis rather than appendicitis. She has not yet attained catamenia.

Biopsy and electrocauterization of the cervix were performed February 8, 1940, at which time smears were negative for the gonococcus. The cervix appeared sagged, enlarged and distorted, and the canal showed superficial ulcerations, the clinical picture as a whole being one of long-standing disease.

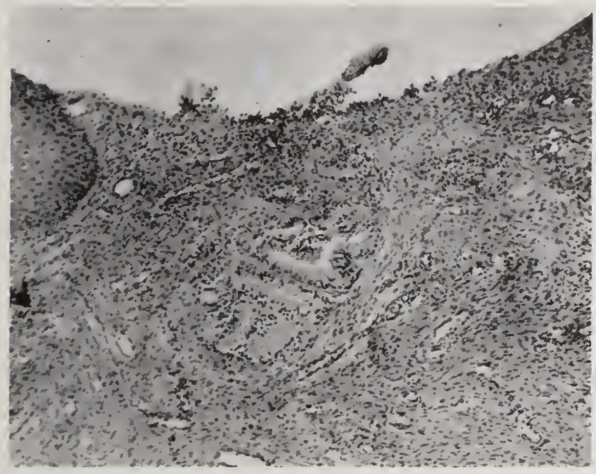

FIG. 1. Junction of squamous and columnar epithelium (low power)

The histopathologic report of Lieut. Col. J. E. Ash, M. C., U. S. A., is as follows: "The material from your patient shows a low-grade, rather superficial inflammatory reaction in some portions of the endocervix (fig. 1). There are scattered clumps of exudate usually on the surface or in gland lumina caught in mucous strands. On careful search of this exudate by MacCallum stain, we were able to find an occasional intracellular Gram-negative diplococcus."

A histopathologic report of Dr. Tomas Cajigas stated: "Sections show islands of granulation tissue under the lining epithelium (including the gland-bearing area), the latter being deficient at some points with the formation of shallow ulcers. The granulation tissue is fairly vascular, some of the larger vessels having rather thick walls. There is mild infiltration with lymphoid cells. Diagnosis—chronic cervicitis."

A broader attitude toward juvenile gonorrhea in females is therefore desirable. I agree with Stein[12] that urethritis is an "inevitable complication" since I have found[13] the polypoid urethra the most characteristic clinical finding in gonorrhea of the genitals of females of all ages. It is well to be suspicious of gonorrhea, long standing or recent, when this characteristic sign is found.

CONCLUSIONS

Vulvocervicitis resembles the adult type of gonorrhea the further the patient proceeds into prepubescence.

Estrogen in the treatment of juvenile gonorrhea of females is reaching its proper level, that of a valuable adjunct. It should be used with full appreciation of its shortcomings, namely, a high percentage of failures and recurrences, high cost, and untoward and harmful side effects.[14] It has not superseded other tried and proved methods, although it has the outstanding virtue of producing less mental trauma than some of the other methods.

The basic principle of creation of local reaction and drainage should be applied to the treatment of juvenile gonorrhea as it is to the treatment of gonorrhea in females of all ages (fig. 2).

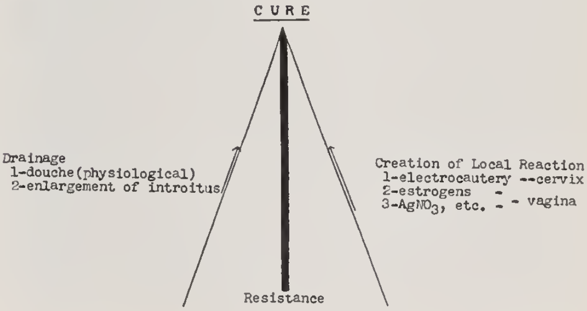
CURE
Drainage
1-douche(physiological)
2-enlargement of introitus
Creation of Local Reaction
1-electrocautery --cervix
2-estrogens -
3-$AgNO_3$, etc. - - vagina
Resistance

FIG. 2. Bases of treatment of genital gonorrhea in females (all ages), non-antiseptic method

Electrocauterization of the cervix, properly performed and checked to prevent stenosis,[15] remains as the best method of treatment of persistent and recurrent gonorrheal infections of the cervix and is of especial value during prepubescence.

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(*Continued on page 368*)

THE VALUE OF ROENTGENOGRAPHY IN THE DIAGNOSIS AND LOCALIZATION OF INTESTINAL OBSTRUCTION*

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It is the purpose of this paper to present briefly some of the radiologic aspects of intestinal obstruction and the present methods by which the cause and site of obstruction may be demonstrated. It is a false conception to think that a definite localizing diagnosis can always be made from a simple radiograph of the abdomen, although by it one sometimes is able to venture a fairly accurate localization.[1] In nearly all cases a diagnosis that an obstruction is or is not present can be made even though the site or type of the osbtruction frequently is difficult to determine. However, by certain additional methods localization and type of lesion can be more often demonstrated. Where there is any question as to whether an obstruction exists, studies within a period of several hours are of considerable aid in the diagnosis, since the roentgenographic findings tend to show progression.

Three factors must be determined in an examination of a simple radiograph of the abdomen in which a diagnosis of intestinal obstruction is suspected:

1. Does an obstruction exist?
2. Is it paralytic or mechanical?
3. Is it large or small bowel, and what is the approximate location?

The diagnosis of the existence of an obstruction is dependent upon (1) the presence of a greater than normal amount of gas in the intestines, (2) the demonstration of gas in locations where it is not normally present, and (3) fluid levels which occur late in the course of the obstruction and are only demonstrable in an upright or transabdominal position. Most of these patients are quite ill and it is not advisable to take radiographs routinely in the erect position, since the diagnosis can be made without demonstrating fluid levels.

Paralytic ileus presents a distention of large and small bowel and rectum, the latter seldom being seen in a mechanical type of obstruction. Mechanical obstruction shows a localized collection of gas in portions of the intestines and a tendency for the gas distal to the point of obstruction to be absorbed, causing a smaller than normal diameter in that part of the intestines.

The large bowel is identified by position and haustral markings, which are further apart from one another than the valvulae conniventes of the small bowel and do not extend across the entire lumen of the intestine. Usually if the diameter of a distended intestine as measured on the simple radiograph is more than three inches, then it is large bowel. In long-standing large bowel obstruction the ileocecal valve may become incompetent and the small intestines will then become distended.[2] The small intestines are identified by position, valvulae, stepladder formation and size. The general position of the jejunum is in the upper left portion of the abdomen, the ileum in the lower right.

It should not be assumed from the above statements that a differentiation between large and small bowel obstruction, or that the exact site of obstruction, can always be made. When any doubt or uncertainty exists, further examination by contrast media is indicated, whereby the type, the extent and the site of the obstructing lesion in the intestines may be demonstrated.

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* From the Roentgenological Division of the Kings County Hospital of the Department of Hospitals of the City of New York; Dr. Richard A. Rendich, Director.

In rare instances a barium enema may be of value in cases where no evidence of obstruction of the colon is evident on the simple radiograph of the abdomen.

The administration of contrast media is not without its dangers and therefore should not be routinely used. Whenever possible the examination of the colon from below should be stopped as soon as the obstructing lesion is satisfactorily demonstrated since the presence of too much barium proximal to the point of obstruction may make a partial intestinal obstruction complete. Contrast media is given orally only in rare instances with extreme precautions and in very small quantities. Recently it has been administered through a Miller-Abbot tube (double-barrel tube) which permits immediate withdrawal if necessary. Reports in the literature indicate that this is a valuable procedure in localizing small bowel obstruction.[3] Pyloric obstruction or obstruction high in the jejunum which may be demonstrated by a simple radiograph or diagnosed by clinical examination is no contraindication to the oral administration of barium, since the material is usually vomited or can easily be withdrawn with a stomach tube.[4]

In the annular type of new growths causing obstruction of the large bowel one usually finds that the degree of resistance to the flow of a barium enema is greater than that offered to the intestinal contents. This is due to the fact that constant pressure by the flow of intestinal contents from above the lesion causes the intestine just proximal to it to become somewhat funnel-shaped and dilated, the smaller end of the funnel being represented by the obstructing lesion.

The following cases demonstrate some of the difficulties and problems which arise and the great aid that is obtained by further study with contrast media.

Case 1.—Dilated loops of large bowel are shown simulating in appearance jejunal obstruction (fig. 1). The haustral markings appear to completely transverse the lumen and there is a stepladder appearance to the dilated loops of intestines. The barium enema revealed a "napkin ring" new growth of the transverse colon (fig. 2). In retrospect, therefore, the portion of the intestines assumed to be small intestine is redundant colon distal to the lesion, indicating that the obstruction was not complete.

Case 2.—The hazard of attempting to read an unsatisfactory radiograph is to be avoided. This patient breathed during the exposure and the diagnostic findings were obscured (fig. 3). Under fluoroscopy the dilated loops of the colon were visualized clearly and a barium enema revealed a twisting and narrowing of the distal part of the descending colon at the point of obstruction (fig. 4). At operation a volvulus was found.

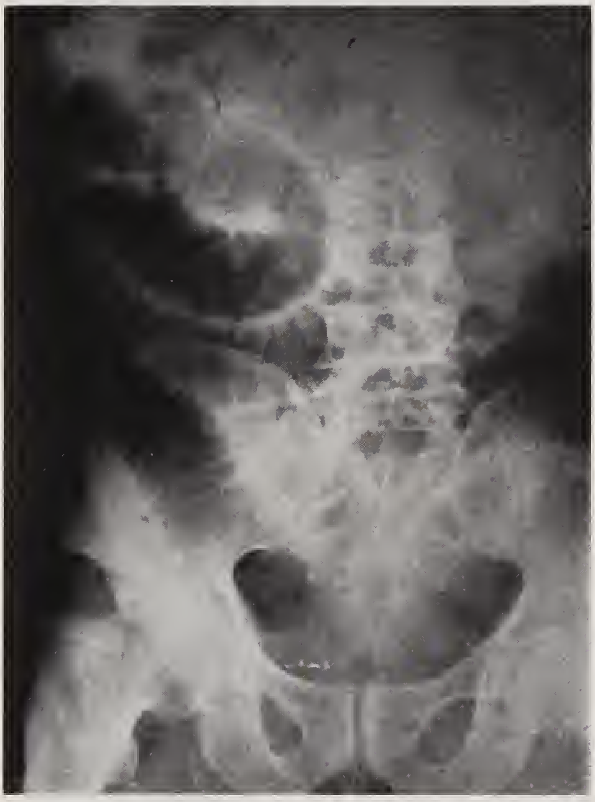

FIG. 1. Case 1. Dilated loops of intestine in left upper quadrant, arranged in stepladder formation with haustral markings traversing entire lumen of distended intestines (criteria usually of small intestinal obstruction).

Case 3.—A radiograph revealed a typical small bowel obstruction with stepladder formation of the distended intestines (fig. 5). Clinically the patient appeared more likely to have a colonic lesion. A barium enema showed diverticulosis of the sigmoid and descending colon but no dilatation (fig. 6). At operation, generalized peritonitis due to a ruptured diverticulum was found.

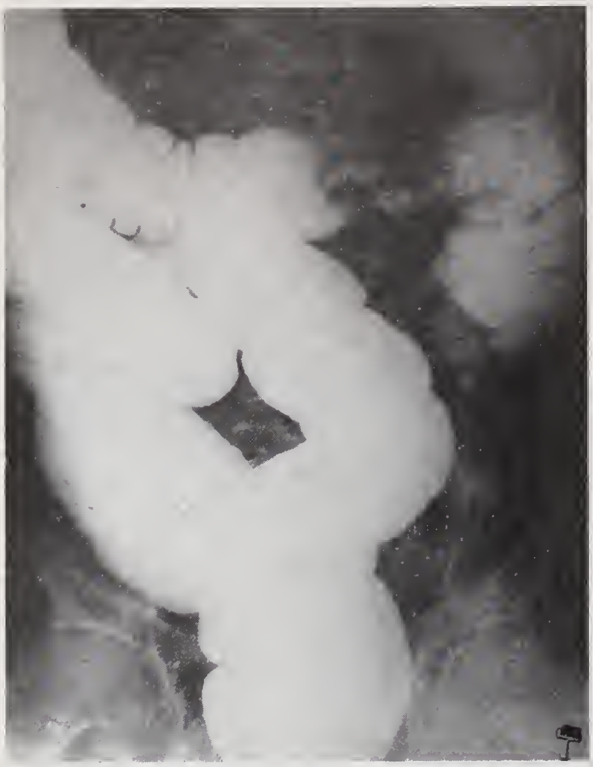

FIG. 2. Case 1. Dilated loops of intestine when filled with barium by an enema seen to be redundant sigmoid, and not small intestine. A neoplastic lesion in the distal part of the transverse colon caused partial obstruction.

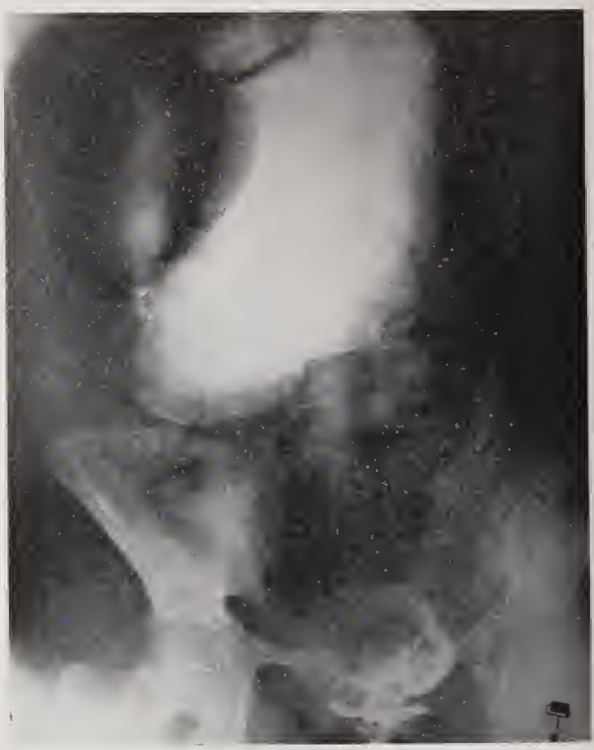

FIG. 4. Case 2. Barium enema revealing dilated sigmoid and twisting at its junction with the descending colon which is distended with gas (patient much more coöperative on this examination); volvulus of sigmoid colon.

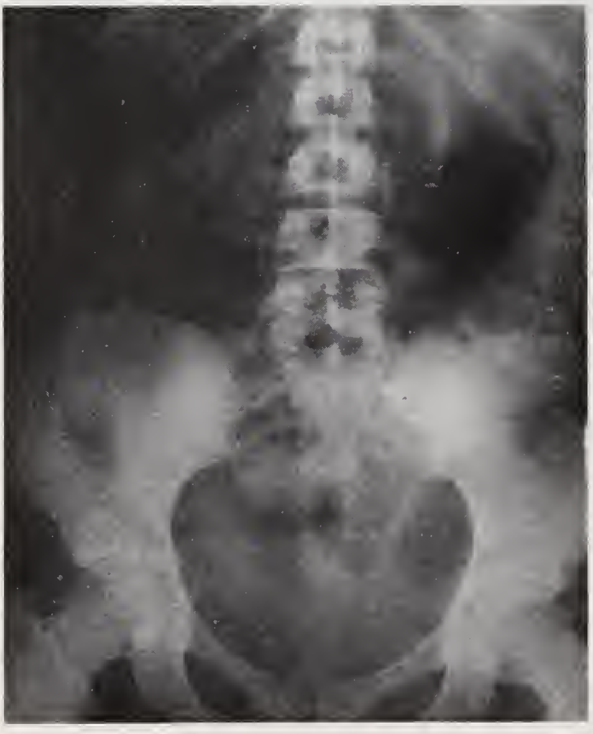

FIG. 3. Case 2. Blurring of detail on a simple radiograph of abdomen due to the fact that the patient breathed.

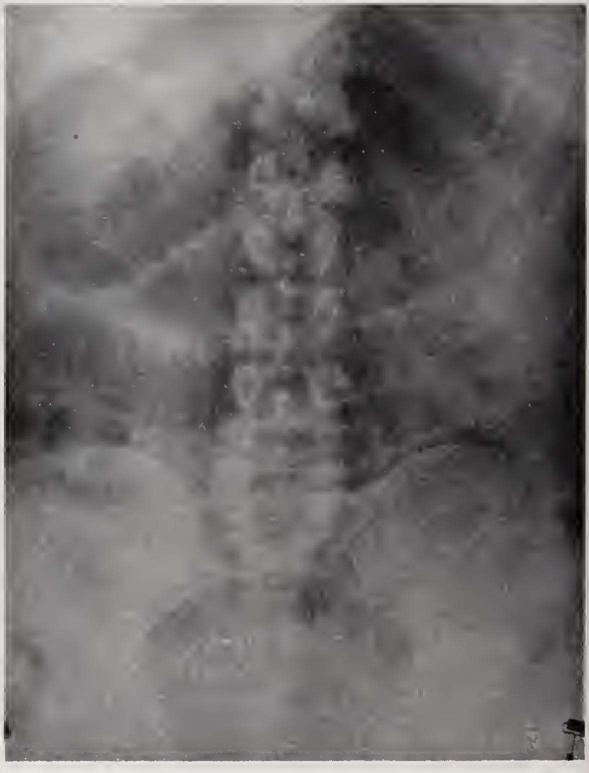

FIG. 5. Case 3. Typical stepladder formation of small bowel obstruction.

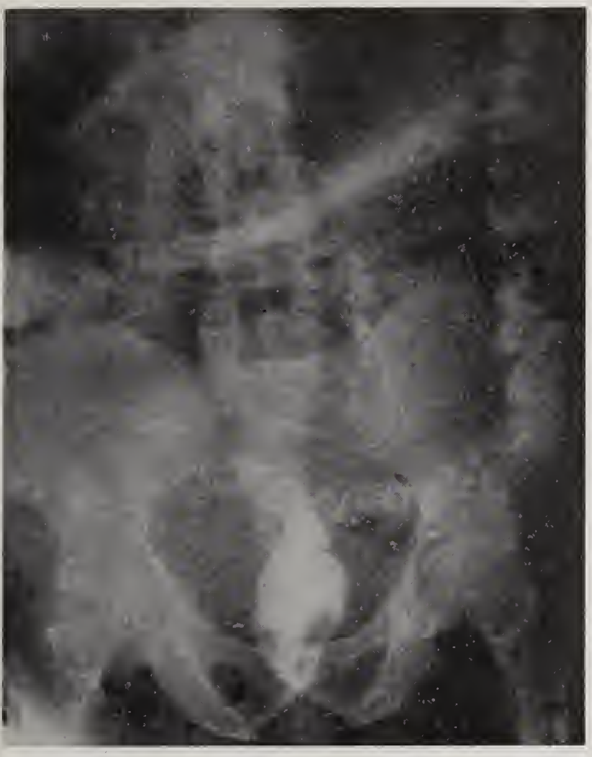

Fig. 6. Case 3. Diverticulosis of sigmoid and descending colon without dilatation (generalized peritonitis due to ruptured diverticulum found).

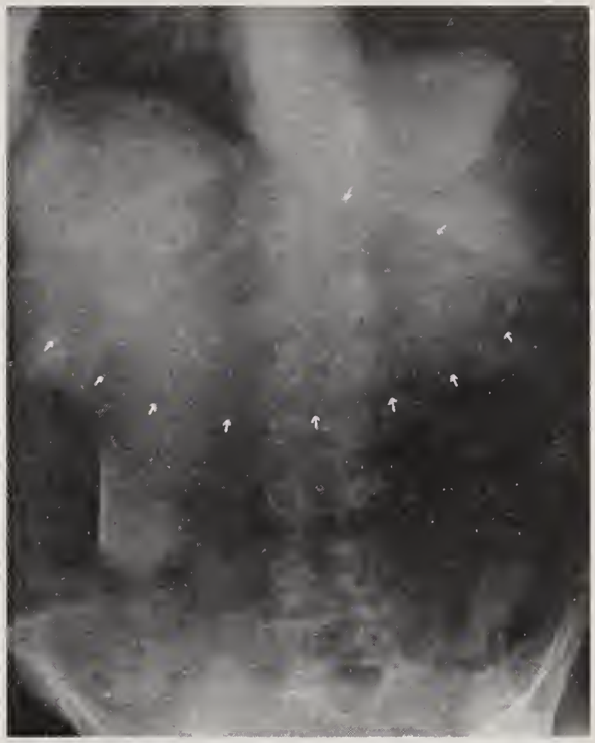

Fig. 7. Case 4. Markedly enlarged stomach containing retained food particles, indicating an obstructing pyloric lesion.

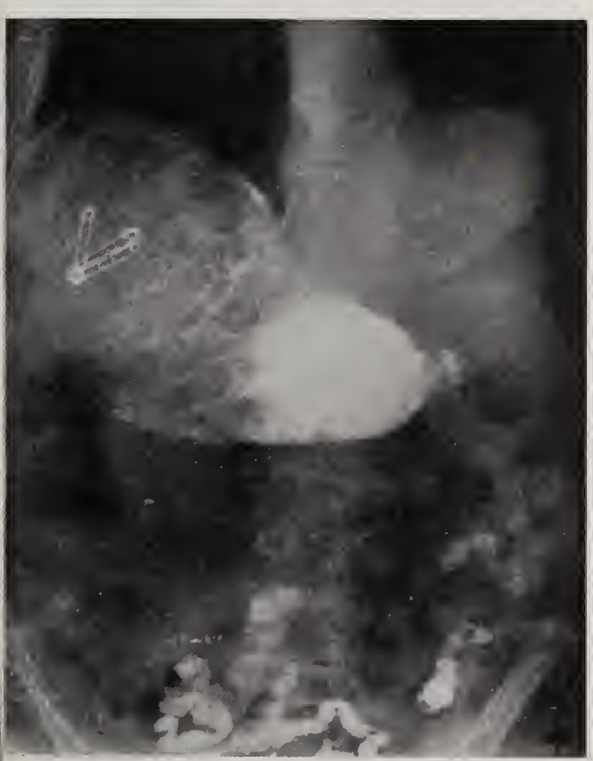

Fig. 8. Case 4. Lesion seen to be a new growth of the pyloric part of the stomach.

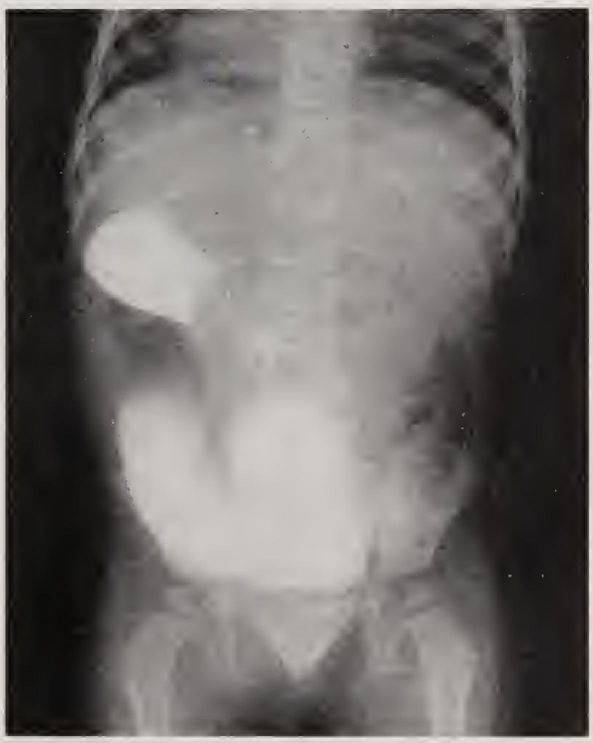

Fig. 9. Case 5. Typical radiologic findings of intussusception of proximal part of transverse colon, which are convexity of the obstructing lesion with a thin stream of barium in the intussuscipiens.

Case 4.—The clinical diagnosis was intestinal obstruction. A radiograph of the abdomen showed marked enlargement of the stomach filled with retained food particles (fig. 7). Following oral administration of barium an obstructing pyloric new growth was demonstrated (fig. 8).

Case 5.—The use of contrast media was of extreme value in demonstrating the typical roentgenographic findings of intussusception of the large bowel (fig. 9), although a simple radiograph was essentially negative.

CONCLUSIONS

1. Radiographic methods are presented for aiding in the diagnosis of intestinal obstruction.
2. The value and precautions necessary in the use of contrast media are stressed.
3. The diagnosis of intestinal obstruction is often difficult and depends upon a correlation of thorough clinical and roentgenologic examinations.

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Adding vitamin B_1 to diet will aid wartime efficiency. The results of recent investigations of vitamin B_1 deficiency "suggest that efficiency for prosecution of a war can be increased by the simple expedient of providing a very little more of vitamin B_1 than the public is receiving. This subject is also receiving consideration by those responsible for our national defense," *The Journal of the American Medical Association* for October 5, 1940 declares in an editorial.

"England, locked in the struggle of total war and conscious of the importance of maintaining at high levels the strength and courage of its people, has fortified margarine with vitamin A and restored calcium and thiamin hydrochloride (vitamin B_1) to flour," the editorial states. "This action was taken on advice from the Medical Research Council and with the recommendation of leaders in nutritional research. Sir John Orr and Dr. J. C. Drummond were largely responsible. In consequence, ill effects from deficiency of calcium and vitamin B_1 will be minimized in England notwithstanding lower rations. Vitamin A will accompany whatever edible fats remain available, and calcium and vitamin B_1 will be supplied as long as any cereal food is left.

"The slim margin that exists between man's physiologic requirements for vitamin B_1 and his intake of this vitamin has long been known; also the fact that storage of this vitamin is minimal and that debility quickly follows when men are deprived of it. The diets of half the population of England were found to provide a level of intake of vitamin B_1 less than that which the League of Nations Technical Commission regarded as necessary for adult men in peace time. That level was 300 international units a day. For soldiers, however, for men in factories and on the farm, in war time, for long work and short sleep, a level of 300 international units is certainly not optimal.

"The Stiebling report from the United States Department of Agriculture (June 1940) revealed a large proportion of 'poor' diets in peaceful America with its bursting granaries and troublesome problems of overproduction. The diets were poor in vitamins A, D and B_1 and in calcium. To some extent they were poor for lack of purchasing power, but to a large extent they were poor because of lack of skill in getting good food values for food expenditures. When white flour and sugar provide 50 per cent of the calories, as is the case in England and America, selection of a diet that can be called good, in the sense that it satisfies more than minimal requirements for vitamin B_1 and calcium, is almost impossible except for an expert.

"Recent reports on induced vitamin B_1 deficiency bear directly on the importance of a liberal allowance of vitamin B_1 for a people engaged in war. Restriction of the intake of this vitamin in a group of healthy subjects, otherwise adequately fed, provoked, among other signs and symptoms, moodiness, sluggishness, indifference, fear, and mental and physical fatigue. The states of mind and body observed in these subjects were such as would be least desirable in a population facing invasion, when maintenance of stamina, determination and hope may mean defeat or successful resistance.

"Other subjects in the experiment mentioned received thiamin hydrochloride in such an amount that their intake of thiamin would be almost, if not quite, up to the standard set for this vitamin by the League of Nations Technical Commission. These subjects remained in apparent good health for weeks, but when, at the end, more of this vitamin was administered—enough to raise the intake to 600 international units a day—alertness increased and measured capacity for physical work was almost doubled."

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THE PROFESSION ON DUTY

Although medical preparedness plans are well advanced, there are still many physicians who have not responded to the request of the American Medical Association's Committee on Medical Preparedness for information about themselves. On October 17, 54.2 per cent of the profession in the District of Columbia had returned the forms sent them. Better results have been obtained by the Medical Society in connection with the survey of its membership. Five hundred and twenty-five, 61 per cent, have replied to the inquiry directed to them by the Society's Committee on Medical Resources. This is disappointing considering the numerous methods which have been adopted to stimulate returns. It is hoped that this reminder will bring the desired results. Prompt return of both questionnaires is not only in the interest of the preparedness program but of physicians themselves. In the event of an emergency, services of practitioners cannot be intelligently utilized unless their special qualifications and their status in the community are known.

As time passes, the extent of the demands which will be made on the medical profession becomes more apparent. Not only will there be a large number of practitioners absorbed in the military services, but as the personnel of the armed forces expands, there will of necessity be readjustments in civil life. Physicians who stay at home will be called upon to assume greater responsibilities for the health of the civilian population.

At the moment, the most important task is that of assisting the Selective Service Boards. Examination of those drawn in the draft will be made by volunteer physicians. The District of Columbia has been divided into twenty-four districts. To each of these will be assigned examining physicians. The method by which this will be done is described elsewhere in this issue of the Medical Annals. The point to be made here is that a heavy obligation rests upon the individual examining physician. It is, of course, his first duty to make a careful examination of each man drawn for service so that no injustice will be done him. At the same time he must not fail to detect those without disqualifying disabilities who wish to avoid military service. Obviously there must be no question about the fairness and impartiality of the examining physician.

This is just one of the many tasks which the medical profession will be called on to perform in the coming months. Whether in military service or out of it, it can be said that physicians will be on duty. And, as in the past, they will acquit themselves with credit to their profession.

HAVE WE LOST CONFIDENCE?

Casual conversation often reveals our innermost thoughts more than we realize. This is particularly true in difficult times such as the present when life as we have known it hangs in the balance. It is not to be wondered at, then, that the future and what may be in store for the people of this country is currently a topic of discussion.

Physicians in common with others seek security for themselves and their families. They want reasonable assurance that they and their dependents will not be in want or be denied the opportunities which now exist. What they see and hear is not encouraging. On the contrary it has been so disturbing as to cause bewilderment and foreboding. An illustration of this is the frequently heard comment that if things get too bad, it will always be possible to turn to the soil. Somehow, in the minds of many people, a plot of land on which to raise the necessities of life will relieve them of any worry about subsistence regardless of what happens to the country. How serious persons are who advance such ideas, one is not certain. Nevertheless it discloses a trend of thought which is at present quite common.

Of course, such reasoning is fallacious because one cannot escape realities in this manner. Situations, no matter how difficult, must be faced. If this is not done, disintegration and chaos will result. The most disturbing element in the whole picture is the lack of confidence in our ability to meet whatever issues may arise. The explanation perhaps is that we have received some pretty severe shocks in the past year. Unbelievable events have occurred abroad. Free peoples have been subjugated in a most barbaric manner. One country after another has come under the domination of dictators and it has seemed that democracy might not survive. But as the European struggle approaches its climax it becomes more apparent that this need not be so. The unparalleled courage of the people of Great Britain has been an inspiration to all democratic countries. We see more clearly now that democracy can be maintained if individual citizens have faith in themselves and their country.

There is no group that should have a better understanding of this situation than physicians. None have a more intimate knowledge of human nature. They know its weaknesses and its strength. Medical men should therefore keep in mind that what they say and do in these perilous times may to a greater extent than they recognize determine the fate of our way of life.

PERTINENT PARAGRAPHS

September Meetings As might have been expected, September proved to be an exceedingly busy month for the Society's Boards and Committees. Much of the activity, of course, has been in connection with the ANNUAL SCIENTIFIC ASSEMBLY. However, the regular Society program has not been neglected as the following list of meetings held during the month of September will disclose.

September 6	Subcommittee on Finance, Annual Scientific Assembly
September 9	Medical Bureau Committee House Committee
September 10	Committee on Industrial Medicine
September 11	Subcommittees on Banquet, Luncheon and Entertainment, A. S. A.
September 12	Medical Bureau Committee
September 13	Subcommittees on Attendance, Associates and Publicity, A. S. A.
September 16	Committee on Cancer Control Subcommittee on Sports Obstetrical Board
September 17	Subcommittee on Scientific Exhibits, A. S. A.

September 20	Committee on Public Health
September 23	Executive Board
September 24	Board of Censors Committee on Industrial Medicine
September 25	Committee on Arrangements, A. S. A.
September 27	Committee on Medical Resources Committee on Public Health
September 30	Executive Committee of the Women's Field Army Medical Bureau Committee

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Our Case

Members of the Society should not fail to read the President's Page in this issue. Dr. Borden's comments on the court case which is scheduled to begin on October 21 deserve the thoughtful attention of all readers of the Medical Annals. Undoubtedly this case, whatever the outcome, will have great significance for the future. In view of this, the medical profession everywhere in this country will follow the proceedings with the closest interest. Before another number of the Medical Annals appears the case may be terminated. If so, the results will be set forth in these pages.

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Secretaries' Conference Cancelled

A communication has been received from Dr. Olin West, Secretary of the American Medical Association, stating that the Board of Trustees of the Association has decided that the Annual Conference of Secretaries of Constituent State Medical Associations will not be held this year. The reason for this action is that the tremendous volume of work which has been placed on the Committee on Medical Preparedness requires a large part of the time of the Association's administrative personnel. The Committee plans to hold an undetermined number of meetings, some of them with state chairmen present. The first of the latter was held on September 20.

There is also the case of the United States versus the American Medical Association, et al., which begins on October 21. This too will make heavy demands on the administrative personnel.

Secretaries' Conferences have been held with regularity for many years. On only one other occasion in the past decade has it been found necessary to cancel it. This occurred in 1938 when a special session of the House of Delegates was held to consider pending health legislation.

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Premarital Examinations

The Society's Executive Board has had under consideration for several months legislation requiring examinations and laboratory tests for syphilis of all applicants for marriage license in the District of Columbia. Recently a new bill was drafted. This will receive immediate consideration by the Committee on Public Policy to whom it was referred.

In view of the reports which recently appeared in local newspapers giving the impression that the Medical Society was not interested in this legislation, Dr. Daniel L. Borden, President of the Society, addressed a letter to the Honorable Melvin C. Hazen, President of the Board of Commissioners of the District of Columbia. Dr. Borden stated the Society's position as follows:

"It would be unfortunate if the District Commissioners gained the impression from reports appearing in the press in regard to the proposed premarital law for the District of Columbia, that the Medical Society had ignored or deliberately delayed action on it.

"It is true that the Society has not submitted its recommendations to the Health Officer; however, the proposed law, which was referred to the Society some seven months ago, has been considered by the Society's Committee on Public Policy and the Executive Board, which still has to act upon it. Because there are controversial issues involved, investigation and study had to be given the proposal. The Society will state its views in regard to this legislation shortly.

"As the records will show, the Medical Society has not only supported measures proposed by the District Health Officer which it believed to be in the public interest, but it also has initiated many public health procedures.

"As stated in the beginning, we thought it desirable that you know these facts. You can count on the medical profession of Washington to coöperate with the District Government in any way that it possibly can."

In his reply Mr. Hazen requested the Society to designate a member of the Medical Society to serve on a committee consisting of a representative of the Medical Society, a member of the Bar Association, the Health Officer and the Corporation Counsel of the District of Columbia. This committee, Mr. Hazen stated, would hold a public hearing on the proposed legislation.

The President immediately appointed Dr. Edgar P. Copeland, Chairman of the Committee on Public Policy, which had the original bill under consideration. As this issue of the Medical Annals goes to press the hearing has not been held.

For the information of the membership a draft of the revised bill appears on page 361 of this issue.

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Medical Guides and W.P.A. Examinations

At a meeting of the Executive Board held on July 17 approval was given a plan submitted by the Advisory Committee to the Washington Self-Help Exchange and Goodwill Industries whereby physical examinations of W.P.A. applicants would be made. The task of the Medical Guides at the Self-Help Exchange who will make these examinations is to simplify and expedite them so that W.P.A. applicants can secure qualifying physical examinations without delay and to have rejections based on claimed disabilities reviewed. Where it is possible immediate steps are to be taken to rehabilitate those whose disabilities are remedial.

A number of applicants who had previously been rejected have already been rehabilitated. Coöperating in this undertaking has been the Health Security Administration through which the necessary medical attention was obtained. To date not less than 150 persons have been examined. In each instance a letter has been directed to proper authorities indicating the applicant was eligible for employment or protesting previous rejection.

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Emergency Facilities

An informative handbook has just been issued by the Health Security Administration describing the emergency facilities in Washington, nearby Maryland and Virginia, with particular reference to their location and methods of immediate contact. Hospital facilities in the District of Columbia and adjacent counties are not only located on a map but telephone numbers are also given. Similar information is included about ambulances.

Members who desire a copy of this handbook can obtain one by writing or calling the Health Security Administration.

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Membership in Group Hospitalization Increases

It is significant that the enrollment of physician subscribers to Group Hospitalization has increased considerably in recent months. On September 1 the total number was 323. Books will again be open for new subscribers on February 1. Physicians desiring to participate should indicate their wish to do so at least thirty days before that date.

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Women's Field Army

At a meeting on September 30 the Executive Committee of the Women's Field Army for the District of Columbia was reorganized. The Chairman of the Committee is Colonel Eugene R. Whitmore. Other members are Drs. Edith S. Coale, Harry H. Kerr, William J. Stanton, Edwin A. Merritt, Daniel L. Seckinger, Melvin P. Isaminger, Charles B. Hall, representing the District of Columbia Dental Society, Mrs. Theresa McGee of the Washington Council of Social Agencies, *Assistant Secretary*, and Mr.

Theodore Wiprud, *Secretary*. Present at the meeting was Mrs. Marjorie Illig, National Commander of the Women's Field Army, who discussed the recently adopted cancer control program and organization work incidental to the drive for membership. Choice of a District Commander for the Army was also considered but no appointment has yet been made. The work of the Committee is exceedingly important and its members are looking forward to a very successful year.

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Fall Tennis Tournament

Unusual interest was evidenced at the first Fall Tennis Tournament sponsored by the Medical Society of the District of Columbia, finals of which were held at the Columbia Country Club in October. Dr. Alfred H. Richwine, Vice Chairman of the Society's Committee on Sports, reports that while there were not many physicians participating, a much larger turnout is expected in the spring when another tournament is planned.

Winners in the tournament were the following:

Veterans singles—(40 years of age or over) Dr. E. Osmun Barr won from Dr. F. Scott Avery, 6–3, 6–3.

Veterans doubles—Dr. John A. Reed and Dr. Benjamin Dean won from Dr. E. Osmun Barr and Dr. F. Scott Avery, 6–3, 6–1.

Open singles—Dr. A. H. Richwine won from Dr. Stephen Verges, 6–3, 6–3, 6–2 (three sets out of five).

Open doubles—Dr. Stephen Verges and Dr. Philip Degnan won from Dr. F. Scott Avery and Dr. Richard S. Hulburt, 6–0, 6–3.

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Physicians' Golf Tournament

A surprisingly large number of physicians turned out for the first Physicians' Golf Tournament sponsored by the Medical Society of the District of Columbia, which was held at the Burning Tree Country Club on September 19. Forty-four participated in the tournament, there being forty-eight on hand for dinner. It was a most enthusiastic group and there was general agreement that the tournament should become an annual event. Prizes went to the following:

Low gross	Dr. Hayden Kirby-Smith	80
	Dr. W. Calhoun Stirling	81
Low net	Dr. Wm. M. Ballinger	68
	Dr. Frank Hand	68

High score on any hole	Dr. Herbert Bauersfeld
1st blind bogie prize	Dr. W. C. Sparks
2nd blind bogie prize	Dr. C. J. Agnew
3rd blind bogie prize	Dr. Norvell Belt
4th blind bogie prize	Dr. Clayton Hawfield

Prizes were donated by the following firms:

Thompson's Dairy
John H. Wilkins Company
Liebel-Flarsheim Company
Peoples Drug Stores, Inc.
Beuchler's
Kloman Instrument Company
Maxwell & Tennyson
Joseph Gawler's Sons

Participants in the tournament were as follows:

Drs. W. J. C. Agnew, Scott Avery, Wm. M. Ballinger, Herbert Bauersfeld, Norvell Belt, J. C. Bradley, Weston Bruner, Jr., J. H. Bullock, Neil Campbell, Alan Chenery, Robert J. Coffey, Edward J. Cummings, F. J. Eichenlaub, Thomas Foley, Leo B. Gaffney, Frank Hand, Clayton Hawfield, James Hawfield, R. K. Hollingsworth, Hugh O. House, George R. Huffman, W. H. Jenkins, James P. Kane, Edward A. Kelly, Joseph Kennedy, Hayden Kirby-Smith, A. B. Little, P. A. McLendon, James M. Moser, Joseph J. Mundell, G. K. Nutting, John F. Preston, W. G. Puryear, Paul Putzki, Luther Sheldon, W. C. Sparks, R. H. Spire, Wm. J. Stanton, W. C. Stirling, W. R. Stokes, S. R. Taggart, Wm. D. Tewksbury, E. W. Titus and Alfred Wilson.

Members of the Committee on Sports in charge of the event were: Dr. George R. Huffman, *Chairman*, Drs. Alfred H. Richwine and Wm. G. Puryear.

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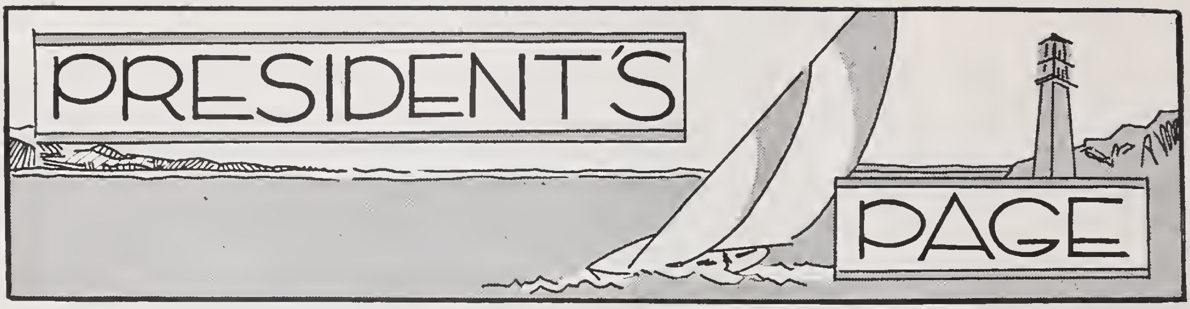
Solve Your Telephone Problems. Subscribe to MEDICAL BUREAU.

PRESIDENT'S PAGE



OCTOBER 21, 1940

The medical profession, in this time of need, has again come to the front and unreservedly offered all possible aid and assistance in connection with the defense program of our country. The American Medical Association has accepted the responsibility of classifying its members for service. So great is the detail work in connection with this task that the Association has been obliged to organize a new department to handle this assignment. Our own Society has set up a Committee on Medical Resources that has worked throughout the summer to classify physicians within the District of Columbia so that we may be ready for any emergency.

This program has caused many of our members to question how the pending litigation affects our status. In other words, can an indicted physician, individually or as a member of an indicted organization, volunteer to serve his country in time of an emergency?

It is with mixed emotion that we see the tragic picture of a group of men whose honesty and integrity have never been questioned but who suddenly find themselves precipitated into the middle of a criminal prosecution.

Known and honored by their associates, these defendants have represented the exacting honesty and integrity engrained in the fundamental principles of the medical profession. Those of us affected because of our membership in the American Medical Association or the District Medical Society have keenly felt the stigma of this charge. Only those, however, who must sit in court day after day and week after week will feel the full force of this unhappy situation.

One, a greatly beloved member of our Society, has passed on to the court of highest jurisdiction, his last days darkened by the shadow of this indictment.

Daniel Le Ray Borden

MEDICAL PREPAREDNESS NEWS

Editor's Note: Because it is important that physicians in the District of Columbia be kept informed in regard to preparedness plans, this new department of the Medical Annals has been inaugurated. It will not be possible to publish lengthy documents. Members desiring detailed information should call Theodore Wiprud, Secretary of the Committee on Medical Resources, District 3111.

Plans for the participation of physicians in the draft program have been completed. In response to a call for volunteers to serve as examining physicians, 262 practitioners responded. From these returns physicians were drawn to serve in each of the twenty-four districts, except the eleventh, twelfth, fifteenth and nineteenth districts, to which colored physicians chosen by the Medico-Chirurgical Society, Inc., were assigned. The drawing took place at a meeting of the Committee on Medical Resources on October 10.

Names of examining physicians were submitted to General Albert L. Cox, Selective Service Director for the District, who presented them to the District Commissioners. They in turn submitted them to the President of the United States, who made the following appointments:

District No. 1	B. C. Harden, Jr.
District No. 2	C. W. Culver
District No. 3	William J. Stanton
District No. 4	Charles W. Harnsberger
District No. 5	Henry M. Lowden
District No. 6	Samuel Benjamin
District No. 7	Stuart Foster
District No. 8	Linn F. Cooper
District No. 9	William P. Argy
District No. 10	Henry R. Schreiber
District No. 11	J. A. Keene
District No. 12	William Gaines
District No. 13	Clayton Hawfield
District No. 14	William A. Mess
District No. 15	Theodore Pinckney
District No. 16	A. W. Valentine
District No. 17	M. H. Prosperi
District No. 18	E. Y. Davidson
District No. 19	Frank H. Trigg
District No. 20	A. Fife Heath
District No. 21	R. W. Conklin
District No. 22	Edward Burke Kelley
District No. 23	Edwin S. Crisp
District No. 24	R. K. Hollingsworth

Members for the Medical Advisory Committees were drawn from the specialists who volunteered to aid with the draft program. Their appointments have not yet been announced.

As more men are called up for service, greater demands will undoubtedly be made on physicians in the District. Should there be need for it, the Committee will again canvass the Society for volunteers.

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An offer of coöperation in the local medical preparedness program has been received from the District of Columbia Dental Society through its president, Dr. Daniel L. Lynch, who has informed the Medical Society that the Military Affairs Committee of his organization will, when the need arises, meet with the Committee on Medical Resources. The personnel of the Dental Society's Committee is as follows: Dr. Arthur B. Crane, *Chairman*, Drs. John R. Hogan, Harry Kaplan, Robert E. Motley, Frank B. Netherland, Howard J. Newton, Emil H. Sloan, G. Albert Smith and Harry M. Wheeler.

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A Committee on Medical Resources has been appointed by the Medico-Chirurgical Society, Inc. Members of this Committee are as follows: Dr. Montague Cobb, *Chairman*, Drs. Paul Corneley, T. Edward Jones, William Nelson, Philip Johnson and Howard M. Payne.

Recently a conference was held by Dr. F. X. McGovern, District Chairman for the American Medical Association's Committee on Medical Preparedness, and Mr. Theodore Wiprud, Secretary of the Medical Society, with Dr. Howard M. Payne, President of the Medico-Chirurgical Society, Inc., and Dr. Paul Corneley in regard to the manner in which the two groups might coöperate.

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Additional appointments have been made to the Society's Committee on Medical Resources. As the tasks of the Committee became heavier, it was found necessary to increase the Committee membership. The Executive Board authorized the appointment of the following: Drs. A. Magruder MacDonald, James Alexander Lyon, James A. Gannon and Luther H. Reichelderfer.

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Many inquiries have been received at the Medical Society's office regarding the status of hospital residents and interns who are of draft age and what their status will be if they are drawn. At present they may be inducted into regular service. However, legislation has just been introduced in Congress to provide that

> "(c) Any man selected for training and service under this Act (1) who has been awarded a degree of doctor of medicine or doctor of dental surgery by a recognized medical or dental school, (2) who holds a valid license to practice medicine, surgery, or dentistry in any State, Territory, or possession of the United States, or the District of Columbia, and is engaged in such practice at the time of his selection, and (3) whose physical and mental fitness for such training and service has been satisfactorily determined, shall, in lieu of induction into the land or naval forces of the United States for such training and service, be commissioned as an officer in the Medical Department Reserve, Officers' Reserve Corps, and ordered into the active military service of the United States. . . ."

Further amendment of the Selective Training and Service Act would provide that

> "Medical and dental students at recognized medical and dental schools, and internes and resident physicians, surgeons, and dentists at recognized hospitals, shall be exempt from training and service (but not from registration) under this Act. Notwithstanding any other provision of law, any such medical or dental student, interne, or resident physician, surgeon, or dentist who is a member of a reserve component of the land or naval forces of the United States shall not be ordered or called to active duty or into active service in any of such forces without his consent, except in time of war."

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Commissioned and other officers in charge of the U. S. Public Health Service have been notified that

> ". . . pending enactment of legislation or promulgation of uniform regulations, the Administrator of the Federal Security Agency has directed that as liberal policy as possible be adopted in granting leave without pay to personnel called to extended military service in connection with the limited peacetime emergency. Such leave may be granted in the customary manner for as long as one year. . .
>
> "During the absence of an employee on military duty, it will be the policy to fill his position through temporary or indefinite appointment and to give him an opportunity to return to his former position in every case where the position has retained its identity during the period of his absence. In the event the position has been substantially altered or abolished because of reorganization or reduction in force, steps will be taken to place him in a position with comparable duties and salary."

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The American Medical Association's Committee on Medical Preparedness has divided the Nation into Corps Areas. Each state has a representative who is under the direction of the Corps Area representative. The District of Columbia is in the Third Corps Area, which is composed of Pennsylvania, Maryland and Virginia. Dr. Harvey B. Stone of Baltimore is the Corps Area representative.

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Dr. F. X. McGovern, District Chairman of the American Medical Association's Committee on Medical Preparedness, will participate in a National Defense Program sponsored by the Graduate Nurses Association on November 4.

DRUGS NEEDED BY FINLAND

Reports received from Finland indicate that there is a shortage of all kinds of drugs, especially the vitamins. A request has been received from Dr. Elma B. Carr, 1029 Vermont Avenue, N.W., for drug samples to meet this need. Arrangements have been made through the Finnish Legation to forward shipments of these drugs. Practitioners in the District of Columbia who wish to contribute their samples should deliver them to Dr. Carr or call her office, Metropolitan 0788, and arrangements will be made to pick up the drugs. Your assistance will be appreciated.

MEDICAL BUREAU BEGINS OPERATION DECEMBER 1

Authorization to establish MEDICAL BUREAU, the proposed twenty-four hour telephone service, was granted by the Medical Society at a meeting on October 9. Operation will begin on December 1, when the new telephone directory will be issued.

Originally the Society had approved the establishment of the BUREAU only after 200 subscribers had been obtained. By recent action it waived this requirement and in addition granted a loan of $1,000, which is to be used to subsidize the BUREAU if necessary during the first six months. This was done upon the recommendation of the Medical Bureau Committee, which pointed out that many physicians hesitated to give up their present arrangements until they were certain that the BUREAU would actually be inaugurated. The Executive Board concurred in this view, and the Society's action resulted. The sum advanced by the Society will be repaid when the BUREAU is in a position to do so.

More than one hundred physicians have subscribed to the BUREAU, and it is expected before another directory is issued that the goal set, 200, will have been reached.

Two types of service are being offered. The first is known as the Alternate Listing Service. In connection with this service a special listing, "If no answer call MEDICAL BUREAU, Republic 6100," will be inserted in the general and classified sections of the telephone directory. The BUREAU, in possession of information as to the subscriber's whereabouts, will locate him for patients or others who wish to get in touch with him. The other type is known as Secretarial Service. Under this arrangement the physician's office is connected with the BUREAU switchboard by a private wire. Whenever the telephone rings in the physician's office, a signal appears on the switchboard. If there is not an immediate response the BUREAU operator answers as though she were the physician's secretary. The call is then relayed to the physician.

The cost to the subscriber for the Alternate Listing Service is $2.75 per month, plus 25 cents for listings in the directory which is paid to the telephone company. The Secretarial Service is $4.00 per month, plus cost of installation and rental of a private wire.

In addition to handling telephone calls the MEDICAL BUREAU will provide other services.

Members desiring information or wishing to subscribe to the BUREAU should call the Society's office or members of the Medical Bureau Committee, who are Dr. Joseph Horgan, *Chairman*, Drs. R. Lomax Wells, Wm. F. Burdick, Norvell Belt, Allen S. Cross, Herman Hoffman, Howard P. Parker and Mr. Theodore Wiprud, *Secretary*.

PROPOSED LEGISLATION REQUIRING PREMARITAL EXAMINATIONS

Because of the public interest in legislation which would require premarital examinations in the District of Columbia and the important part the medical profession would play if it were enacted, the text of a bill recently submitted for the Medical Society's consideration is here published for the information of the membership.

AN ACT

To require examination and laboratory tests for syphilis of all applicants for marriage licenses before the issuance thereof in the District of Columbia, and to abolish common law marriages in the District of Columbia.

BE IT ENACTED BY THE SENATE AND HOUSE OF REPRESENTATIVES OF THE UNITED STATES OF AMERICA IN CONGRESS ASSEMBLED. That it shall be the duty of the Clerk of the District Court of the United States for the District of Columbia before issuing any license to solemnize a marriage to require each applicant therefor to file with him a certificate from a physician licensed to practice medicine in the District of Columbia, or from a commissioned Medical Officer of the United States Army, Navy or

Public Health Service, which certificate shall state that the applicant has submitted to such examination, including a standard serological test, as may be necessary for the discovery of syphilis, made on a day specified in the certificate which shall be not more than the 30th day prior to that on which the license is applied for, and that, in the opinion of such physician, based on the history and clinical and laboratory evidence, the person either is not infected with syphilis, or is not in a stage of that disease which may become communicable to the marital partner. Said certificate shall be signed by the applicant in the presence of the physician.

Sec. 2. Said certificate shall be made on a form to be provided and distributed by the Health Department of the District of Columbia and shall contain on the same form a statement, from the person in charge of the laboratory making the test, or from some other person in the laboratory authorized to make such reports, setting forth the name of the test, the date made, and the name and address of the person whose blood was tested but not stating the result of the test. This form is hereinafter referred to in this Act as the "certificate form." Upon a separate form also prepared and distributed to laboratories approved by the Health Department, and designated as Premarital a detailed report of the laboratory test, showing the result of the test, shall be made out by the laboratory in duplicate. One copy of this detailed report shall be transmitted by the laboratory to the physician, making the examination, and the other copy to the Health Department. Said "Premarital" laboratory report forms shall be held by the said physician and by the said Health Department in absolute confidence and shall not be open to public inspection except on order of a justice or judge of a court of competent jurisdiction requiring its production by said Health Department.

Sec. 3. For the purpose of this Act a standard laboratory test shall be any laboratory test for syphilis approved by the Health Officer of the District of Columbia, and shall be made at a laboratory approved by the Health Officer of the District of Columbia. Such laboratory test as is required by this Act shall be made on request without charge at the laboratory of the Health Department of the District of Columbia. To be valid such test shall be made not more than thirty days before the issuance of the marriage license to which it applies. No marriage license issued after this act becomes effective shall be valid more than thirty days from date of issue.

Sec. 4. Because of an emergency or other cause shown by affidavit or other proof, a judge of the District Court of the United States for the District of Columbia, if satisfied by medical or other testimony or both that neither the health of the individuals nor the public health and welfare will be injuriously affected thereby, may make an order, on joint application of both of the parties desiring the marriage license, dispensing with those requirements which relate to the filing with the Clerk and the Health Department of the physicians' certificates and the laboratory statements or, the said certificates and statements having been filed, extending the thirty day period following the examination and tests for the issuance of such license to not later than ninety days after such examination and tests. The order shall be accompanied by a memorandum in writing from the judge, reciting his reasons for granting the order. The order and the accompanying memorandum shall be filed with the said Clerk and the latter shall thereupon accept the application for the marriage license and issue the same, if the applicants are otherwise qualified by law to contract matrimony, without the production or filing of the physicians' certificates and the laboratory statements, or shall accept the application within any such extended period, as the case may be. The Clerk and his employees shall hold such memorandum of the judge in absolute confidence and it shall not be open to inspection, except on order of a justice or judge of a court of competent jurisdiction requiring its production.

Sec. 5. Any applicant for a marriage license, any physician, or representative of a laboratory who shall knowingly misrepresent any of the facts called for by the certificate form or the detailed laboratory report prescribed by this Act; or any person who shall otherwise fail to comply with the provisions of this Act shall be deemed guilty of a misdemeanor and shall be subject to a fine of not more than Five Hundred Dollars ($500.00) or imprisonment for a period of not more than six (6) months, or both.

Sec. 6. Marriage attempted to be entered into by mutual agreement, commonly referred to as "common law marriages," subsequent to the effective date of this Act shall be null and void and of no effect.

Sec. 7. The sum of   dollars ($), or so much thereof as may be necessary, is hereby authorized to be appropriated to cover additional clerical, printing, laboratory and other expenses in carrying out the provisions of this Act.

Sec. 8. This Act shall take effect on (a day specified at least three months after its passage).

MEETINGS

Wednesday, November 6

Business Meeting

Speaker: George C. Ruhland, M.D., Health Officer
Subject: "Practices and Policies of the Local Health Department"

Buffet Supper

Wednesday, November 13

Joint meeting with the Baltimore City Medical Society.

"Progressive Muscular Dystrophy; Its Present Status." Allen F. Voshell, M.D., F.A.C.S., Professor of Orthopedic Surgery, University of Maryland School of Medicine.

"Reactions to Local Anesthetic Agents." Harris B. Shumacker, Jr., M.D., Baltimore.

"Cauda Equina Tumor with Unusual Symptomatology." James G. Arnold, Jr., M.D., Baltimore.

Buffet Supper

Wednesday, November 20

No meeting

Wednesday, November 27

"The Diagnosis and Treatment of Lesions of the Cranial Nerves." Walter E. Dandy, M.D., F.A.C.S., Clinical Professor of Neurological Surgery, Johns Hopkins University School of Medicine.

"Tumors of the Brain: Symptomatology." Walter Freeman, M.D., F.A.C.P., Professor of Neurology, George Washington University School of Medicine.

NEWS AND PERSONALS

The American Board of Obstetrics and Gynecology announces a written examination and review of case histories (Part I) for Group B candidates to be held in various cities of the United States and Canada on Saturday, January 4, 1941, at 2:00 p.m. Formal notice of the place of examination will be sent each candidate several weeks in advance of the examination date. No candidate will be admitted to examination whose examination fee has not been paid at the Secretary's office. Candidates who successfully complete the Part I examination proceed automatically to the Part II examination, which will be held in June 1941.

Candidates for reëxamination in Part I (written paper and submission of case histories) must request such reëxamination by writing the Secretary's office not later than November 15, 1940. Candidates who are required to take reëxaminations must do so before the expiration of three years from the date of their original examination.

The general oral and pathological examinations (Part II) for all candidates (Groups A and B) will be conducted by the entire Board, meeting in Cleveland, Ohio, in June 1941, immediately prior to the annual meeting of the American Medical Association.

Application for admission to Group A, Part II examinations must be on file in the Secretary's office not later than March 15, 1941.

After January 1, 1942, there will be only one classification of candidates, and all will be required to take the Part I and Part II examinations.

Further information and application blanks may be secured by addressing Dr. Paul Titus, *Secretary*, 1015 Highland Building, Pittsburgh (6), Pa.

The American Medical Association, in coöperation with the **National Broadcasting Company,** is presenting the sixth annual series of dramatized radio programs entitled, "Doctors at Work." The series will open Wednesday, November 13, 1940, and will run for thirty consecutive weeks, closing with a broadcast from the A. M. A. meeting in Cleveland on June 3, 1941. The program is scheduled for 10:30 p.m. over the Blue network, other NBC stations and Canadian stations.

The programs will dramatize what modern medicine offers the individual in the way of opportunities for better health and the more successful treatment of disease. Incidental to this main theme, the programs will explain the characteristics of the different fields of modern medicine and its specialties.

"Doctors at Work" will be broadcast from scripts by Mr. Wm. J. Murphy, NBC script writer, and will be produced under the direction of Mr. J. Clinton Stanley, director of "Medicine in the News," which was the series dramatized last year. Dr. W. W. Bauer of the A. M. A. Bureau of Health Education will supervise the program.

Descriptive posters for local distribution can be secured gratis from the Bureau of Health Education, American Medical Association, 535 North Dearborn

Street, Chicago. Program titles will be announced weekly in the *A. M. A. Journal* and monthly in *Hygeia*.

The American Conference on Industrial Health will be held Thursday, November 14, at the Towers Club in Chicago. This conference, which is sponsored by the American Association of Industrial Physicians and Surgeons, is held for the purpose of correlating the viewpoints of all persons who are interested in promoting industrial health.

The Southern Medical Association will meet in Louisville, Kentucky, November 12 to 15. Mr. C. P. Loranz, Secretary-Manager of the Southern Medical Association, attended the Society's ANNUAL SCIENTIFIC ASSEMBLY on October 17.

The eighth series of the **Thomas William Salmon Memorial Lectures** will be delivered by Dr. Nolan D. C. Lewis, Director of the New York State Psychiatric Institute and Professor of Psychiatry at Columbia University. There will be three lectures in the series, scheduled for Friday, November 8, 15 and 22, 8:30 p.m., at the New York Academy of Medicine, 2 East 103rd Street, New York City.

The subjects of the lectures are: I. Historical Perspectives of Psychiatric Thought; II. Modern Ramifications in Psychiatric Thought and Research; III. Prospects for Future Achievement in Psychiatric Research.

The Section on Ophthalmology and Otolaryngology began its fall program on October 18 when Dr. Leroy Schall of the Massachusetts Eye and Ear Infirmary, Boston, addressed the group on "Pathology of Sinuses."

The Section will hold only four meetings during 1940-41, in the months of October, December, February and April. Each meeting will be preceded by dinner at a designated place.

The Section on Gastroenterology announces four regular meetings throughout the year. The first three will be held at the homes of members on December 2, February 3 and March 3. For its fourth meeting the Section will present a program before the Medical Society sometime in May, the date to be announced later.

The Section held a special meeting and dinner on Saturday, October 12, in honor of Dr. Rudolph Schindler, Associate Professor of Medicine, University of Chicago, who invented the gastroscope. The subject of Dr. Schindler's address was "Gastritis and Gastric Cancer."

The Section on Neurology and Psychiatry held its first fall meeting on October 3. The following program was presented: "Subjective Responses to Therapy," Dr. Ralph M. Crowley; "Thrombosis of the Anterior Cerebellar Artery," Drs. Walter Freeman and Daniel Jaffe.

Rev. David V. McCauley, S.J., Dean of Georgetown University School of Medicine, has announced three promotions among its faculty members. **Dr. Edward J. Cummins** has been promoted to professor of clinical ophthalmology, **Dr. William M. Ballinger,** to associate professor of gastroenterology, and **Dr. Edgar Davis,** to professor of clinical surgery.

Fifteen new instructors were named for the coming year, among them Drs. Reuben E. Stone, James E. Nolan and Donald W. Ingham, in clinical medicine; Dr. Abe Cohen, in pediatrics; Drs. James H. Gillen, Wilbur Martin and Francis W. Dunne, in obstetrics.

Dr. Charles Stanley White was guest of honor at a luncheon given by Dr. Walter A. Bloedorn, Dean of the George Washington University School of Medicine, at the Army and Navy Club on September 23. Dr. White delivered the principal address entitled, "A Medical Partnership," at the opening assembly of the academic year. Other guests at the luncheon were:

Dr. Cloyd Heck Marvin, President of the University; Mr. Harry Cassell Davis, Mr. Henry Parsons Erwin, Mr. Joshua Evans, Jr., Dr. Luther H. Reichelderfer, Mr. Walter R. Tuckerman, Brig. Gen. Raymond F. Metcalfe, Maj. Gen. Hugh S. Cumming, Maj. Gen. M. W. Ireland, Maj. Gen. James C. Magee, Col. J. F. Siler, Admiral Ross T. McIntire, Admiral E. R. Stitt, Rear Admiral Harold W. Smith, Capt. Dallas G. Sutton, Dr. E. A. Bocock, Dr. Thomas Parran, Dr. P. S. Rossiter, Dr. George C. Ruhland, the Rev. A. J. McCartney, Dr. George B. Jenkins, Dr. William J. Mallory, Dr. William B. Mason, Dr. Sterling Ruffin, Dr. Errett C. Albritton, Dr. Daniel L. Borden, Dr. Radford Brown, Dr. Roger M. Choisser, Dr. William T. Davis, Dr. Paul F. Dickens, Dr. Harry H. Donnally, Dr. Harry F. Dowling, Dr. Walter Freeman, Dr. Charles R. L. Halley, Dr. Frank A.

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Dr. Walter A. Bloedorn, Dean of George Washington University School of Medicine, has appointed **Dr. Claude Matthew MacFall Professor of Anatomy and Executive Officer of the Department of Anatomy** for the coming year. Dr. MacFall, formerly professor of anatomy at Creighton University, came to George Washington in 1937. He was assistant professor of comparative anatomy at the University of Virginia from 1926 to 1933. In 1926 he received the degree of Doctor of Philosophy from the University of Virginia.

Society members included in the list of promotions were as follows: Harry Ford Anderson, to executive officer of the Department of Dermatology and Syphilology; Russell G. Fields, to associate in dermatology and syphilology; Elmer W. Fugitt, to associate in medicine; A. Fife Heath, to associate in medicine; Bernard L. Hardin, Jr., to associate in medicine; Preston A. McLendon, to clinical professor of pediatrics; Margaret M. Nicholson, to clinical professor of pediatrics; Frederick A. Reuter, to professor of urology and executive officer of the Department of Urology; Charles A. Schutz, to clinical professor of pediatrics; Alexander Simon, to associate in neurology; Thomas C. Thompson, to clinical professor of urology.

Among the new appointments were the following members of the Society: Charles S. Coakley, clinical instructor in surgery; Otto A. Engh, clinical instructor in surgery; Frank B. C. Geibel, clinical instructor in obstetrics and gynecology; Luther W. Gray, fellow in surgery; Bernard W. Leonard, associate in medicine; William C. Meloy, instructor in surgery; Frank R. Shea, clinical instructor in obstetrics and gynecology.

The Woman's Auxiliary to the American Medical Association is making a special effort to stimulate wide-spread interest in its activities by increasing the number of readers of its *Bulletin*.

The *Bulletin* is a successor to the *News Letter*, which for many years has kept the officers and board members acquainted with the progress of the Auxiliaries of all the States. It will be published quarterly and will contain reports of conventions, places of work, inspirational messages from leaders, and timely news in regard to the medical world. The fall issue contains the inaugural address of Mrs. V. E. Holcombe, the National Auxiliary president, as well as a message to women from Dr. Nathan B. Van Etten, President of the American Medical Association.

The Medical Society of Saint Elizabeths Hospital will meet at the Red Cross House at the Hospital on Tuesday, October 22, at 7:45 p.m. Following a brief business meeting there will be a discussion of psychiatric problems concerning military conscription in which Capt. Dallas G. Sutton, U. S. N., Lt. Col. William C. Porter, U. S. A. and Dr. Winfred Overholser, Superintendent of the Hospital, will participate.

The Louis Mackall Medical Society has elected officers for the coming year as follows:

Dr. Norvell Belt, *President;* Dr. Garnet W. Ault, *Vice President;* Dr. James E. Wissler, *Secretary-Treasurer.*

The Washington Clinical Club held its first meeting of the year at the Cosmos Club when new officers were elected. They are:

Dr. Harry S. Bernton, *President:* Dr. Norvell Belt, *Vice President;* Dr. P. S. Constantinople, *Secretary-Treasurer.*

The Hippocrates-Galen Society has elected the following officers for the coming year:

Dr. William Ballinger, *President*; Dr. John McLeod, *Vice President*; Dr. Ernest Sheppard, *Secretary-Treasurer.*

The Jacobi Medical Society announces the election of the following officers for 1940-41:

Dr. Isadore Rodis, *President*; Dr. Samuel M. Dodek, *Vice President*; Dr. Joseph Dessoff, *Secretary*; Dr. Joel Novick, *Treasurer.*

The Woman's Auxiliary to the Medical Society of the District of Columbia held its first fall meeting in the library of the Society's building on October 2. Mrs. V. E. Holcombe of Charleston, West Virginia, the National Auxiliary president, was speaker and honored guest.

Following are the new officers of the Auxiliary who will serve during the coming year:

Mrs. Daniel L. Borden, *President;* Mrs. Caryl Burbank, *First Vice President;* Mrs. Harry Anderson, *Second Vice President;* Mrs. Leonard Goodman, *Recording Secretary;* Mrs. Harold Downey, *Corresponding Secretary;* Mrs. Henry Hornthal, *Treasurer.*

Dr. F. X. McGovern attended the meeting of the American Medical Association's Committee on Medical Preparedness in Chicago, September 20.

Dr. William Thornwall Davis addressed two sessions of the North Carolina Eye, Ear, Nose and Throat Society at Winston-Salem on September 26. His subjects were "Medical Ophthalmology" and "Physiotherapy."

Dr. Davis presented an instruction course on "Accommodative Squint" at the meeting of the American Academy of Ophthalmology and Otolaryngology in Cleveland, October 9 and 10. He will also preside at a panel discussion and will give a talk on "Surgery of Squint" before the American College of Surgeons in Chicago, October 22.

Dr. Wallace M. Yater was guest speaker at the Diamond Jubilee of the Michigan State Medical Society in Detroit September 25. The title of his address was "Surgery of the Heart and the Heart in Surgery."

Dr. Yater also participated in the program of the annual meeting of the Interstate Postgraduate Medical Assembly held in Cleveland, Ohio, October 14–18. He gave a diagnostic clinic on the subject of "Diseases of the Aorta," demonstrating patients.

Dr. W. C. Chaney, President of the Memphis and Shelby County Medical Society, visited the offices of the Medical Society on September 27. Dr. Chaney was particularly interested in the Society's building since the Memphis and Shelby County Medical Society is contemplating the erection of a building of its own in the near future.

Dr. Eugene R. Whitmore gave a talk on "Chronic Cystic Mastitis and Carcinoma of the Breast" at a meeting of the Fourth District Medical Society of Virginia at Petersburg, Virginia on August 27.

Dr. Darrell C. Crain has just been elected to membership in the American Rheumatism Association.

Dr. Paul J. Ewerhardt resigned September 1 from his position as Director of the Washington Institute of Mental Hygiene. He has been succeeded by Dr. Rex E. Buxton of Boston.

Locations for physicians in and outside the District of Columbia are listed at the Society's office. Members desiring information in regard to these locations can obtain them by calling District 3111.

Dr. Paul R. Wilner served at the **Washington Self-Help Exchange** and **Dr. Samuel Diener** at the **Goodwill Industries** during the month of September.

BOOKS RECEIVED FOR REVIEW

Acknowledgment is made of the following books which have recently been received for review:

Annual Reprint of the Reports of the Council on Pharmacy and Chemistry of the American Medical Association for 1939 with the Comments That Have Appeared in The Journal. Pp. 205, with 5 illustrations. Price, cloth, $1.00. Chicago: American Medical Association, 1940.

New and Nonofficial Remedies, 1940, containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1, 1940. Pp. 656 – LXVIII. Price, cloth, $1.50. Chicago: American Medical Association, 1940.

BOOK REVIEWS

Medical Nursing. Edgar Hull, M.D., F.A.C.P., Christine Wright, R.N., B.S., and Ann B. Eyl, B.S. 588 pages with 168 illustrations including 11 colored plates. F. A. Davis Co., Philadelphia, 1940. Price $3.50.

In this new textbook of medical nursing, an attempt is made, in so far as is practicable, to correlate the surgical aspects of disease with the medical. This, in a measure, falls in with the plan of the Curriculum Guide published in 1937 by the National League of Nursing Education, which proposed that medical and surgical nursing be taught as one course. Although the impracticability of the plan has since been established from a teaching standpoint, the book fulfills a definite need in supplying, to a certain extent, a means of integration between medical and surgical nursing.

The book is introduced by a section which deals with etiology, manifestations, diagnosis and treatment of disease in general, together with a chapter on the general principles of medical nursing. This section gives a brief resumé of the foregoing subjects which is calculated to provide a basic understanding of the principles involved.

Following this, the diseases are discussed according to organ systems. Introducing each system is a chapter dealing with etiology, symptomatology, physical signs, laboratory data and X-ray findings pertaining to diagnosis. Each disease is discussed from three distinct viewpoints, "From that of the doctor who directs the treatment; of the nurse who administers it; and of the dietitian who plans and prepares the diet."

The material, which has been carefully chosen, is described in a brief, clear-cut manner and should be readily understandable to one with even a minimum acquaintance with medical science.

Many of the illustrations are small and fail to bring out the salient points intended; others are more useful. Larger and clearer illustrations portraying common manifestations of disease would enhance the value of the work.

I would like to see a chapter dealing with the more important surgical and medical emergencies ordinarily encountered in a general hospital, such as primary and secondary surgical shock, internal hemorrhage, impending coma in diabetic patients, paroxysmal dyspnea, etc. A fundamental knowledge as to recognition and treatment of these conditions would surely enable the nurse to more efficiently assist the physician at a time when speedy and intelligent action is necessary.

However, the text as it stands is excellent and should be a valuable addition to the teaching of medical as well as surgical nursing.

J. M. Barker, M.D.

Frank Howard Lahey Birthday Volume. By many authors. 466 pages. Charles C. Thomas, Springfield, Ill. June 1, 1940.

> "I am a man who has many friends. . . .
> And many friends have me."

These are the closing words to the dedication of the volume; a marvelous tribute to a great surgeon. Some of these many friends have produced a work which, while specifically honoring the man, nonetheless has done honor to themselves and to the medical profession as a whole. It is comprised of articles covering many phases of surgery, principally of the gastrointestinal tract and thyroid gland. All are by distinguished authors and are well written and greatly informative. This book is a valuable addition to any medical library.

J. M. B.

Ten Years in the Congo. W. E. Davis. Price, cloth, $2.50. Pp. 302. New York: Reynal & Hitchcock, 1940.

A medical missionary tells in simple, narrative style, with modest appraisal of his own accomplishments, the story of his ten years' practice in the Congo. Except for the first year, the author was the only white member of the hospital staff at Wema and Lotumbe. During his last year at Lotumbe, over 65,000 patients came to the hospital dispensary to be treated and he performed 536 major operations. This was in addition to trips away from the station for nearly three months at a time where several thousand more were treated. These figures indicate no lack of clientele.

He names a number of the most common complaints—yaws, sleeping sickness, venereal diseases, leprosy, tropical ulcers, hernias, elephantiasis, abdominal tumors, goiters, broken bones, bladder stones and bad teeth, in addition to skin diseases, intestinal worms, lice, and so on—they suffered from "itch, indolence, and indigestion—dirt, dysentery, dermatophytosis, and the devil!" Then he lists complaints they did not have, notably cancer, appendicitis, gall stones and typhoid fever. "I can not say, absolutely, that natives never have these troubles, but none in my experience ever had or else I missed the diagnosis. Sarcomata . . . were not infrequent, but carcinomata did not occur, and . . . I never saw an appendix that I thought was bad enough to take out." The natives obtain their drinking water from indiscriminate sources yet they escape typhoid and cholera. While gonorrhea was almost universal and no precaution was ever taken to protect the eyes of the newborn, the author never saw a case of gonorrheal ophthalmia in an infant. Tuberculosis, however, was increasing rapidly, the natives seemed extremely susceptible to it and no effective way to combat it has yet been found.

The last half of the book is devoted primarily to social aspects of Congo life, including education, religion, concepts of birth, marriage and death, witch doctors and Congo customs.

A. L. E.

Modern Dermatology and Syphilology. S. William Becker, M.D. and Maximillian E. Obermayer, M.D., 871 pages, 461 illustrations, 32 full color plates, J. B. Lippincott Co., Philadelphia, 1940.

This new book is an excellent textbook for the teaching of diseases of the skin and syphilis. It is lucid and complete. Many irrelevant features of some of the older textbooks have been omitted. It is profusely illustrated, and the photographs, some of which are in colors, are excellent. The book is highly recommended to general practitioners, students and specialists on diseases of the skin and syphilis.

OSCAR ADDISON MACK McKIMMIE, M.D., F.A.C.S.

(1868–1940)

Dr. Oscar Addison Mack McKimmie, a Life Member of the Medical Society of the District of Columbia, who for many years was a member of the staff of the Episcopal Eye, Ear and Throat Hospital, died at that institution on August 7, 1940 after a lengthy illness.

Dr. McKimmie was a native of Washington, the son of George and Jesse McKimmie. He was born at the Soldiers' Home where his father did the landscape gardening. Educated in local schools, he was graduated in 1889 from the medical school of Columbian College, now George Washington University. Later he did postgraduate work in London, Paris and Vienna. On returning to Washington in 1901 he entered private practice.

At one time Dr. McKimmie was Professor of Otolaryngology at the George Washington University School of Medicine. During the World War he served on the Medical Advisory Board and with the hospital unit of the Aviation Examining Board. At the time of his death he was a member of the Board of Corporators of the Episcopal Hospital.

Dr. McKimmie was a Fellow of the American College of Surgeons, a member of the American Laryngological Society, the American Bronchoscopic Society and the American Otological Society.

Surviving are his widow, Mrs. Rebe Coleman McKimmie, and a brother, Simon McKimmie of Washington.

CLARENCE ARLINGTON WEAVER, M.D.

(1871–1940)

Dr. Clarence Arlington Weaver, a Life Member of the Medical Society of the District of Columbia, died at his home on August 24, 1940. He had been ill for nearly a year with a heart ailment.

Dr. Weaver was a native of Washington, having been born here sixty-nine years ago. He received his doctor of medicine degree from Jefferson Medical College in 1892 and began practice in Washington two years later, following his resignation as resident from Jefferson Medical College Hospital.

During the Spanish-American War Dr. Weaver served in the Army Medical Corps. At the time of his death he held the rank of lieutenant colonel, retired, in the District National Guard. For many years Dr. Weaver was chief surgeon for the Relief Association of the Capital Transit Company. He was also past president of the Society of Natives and a former member of the Association of Oldest Inhabitants.

Dr. Weaver was a member of the Medical Society of the District of Columbia, the American Medical Association and the Southern Medical Association.

Surviving are his widow, Mrs. Alice Weaver, and two sisters, Mrs. Roscoe L. Oatley and Mrs. Charles J. Newhard, both of Washington.

(Continued from page 341)

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THE IMPORTANCE OF CARDIOVASCULAR-RENAL DISEASES

A STATISTICAL REVIEW*

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Next week your Society is going to spend three days studying cardiovascular-renal diseases. That in itself is indicative of how important a place these diseases occupy in medical thinking today.

Dr. Ylvisaker and I are glad to be with you tonight to give you some facts and figures as well as ideas regarding these diseases, as a preliminary to the course laid out for next week. I shall discuss the question primarily from the record of the past up to the present.

As men actively engaged in medical practice you may be interested in some estimates of the extent of cardiovascular-renal diseases in the country today. I shall give you some figures bearing on that point.

Both as doctors and as human beings, you are interested in knowing whether it is true, as we are often told, that deaths from heart disease are increasing at an alarming rate, and that we are burning ourselves out with hard work, hard play and worry; or whether what the statistics apparently show is simply something we must expect as a greater proportion of the population is concentrated at the older ages. I shall try to convince you, as my studies have convinced me, that there is nothing alarming in the increased death rate attributed to circulatory diseases; that there is indeed cause for congratulation in what has been accomplished. And I shall try to convince you that we do not need to look forward to an inevitable increase in the total death rate at the older ages just because so many more people survive the earlier years of life when infectious diseases of all kinds formerly took such a heavy toll.

Finally, I shall show you, by means of the experience of a group of life insurance companies, how important some of the mildest circulatory abnormalities or impairments are in determining the death rate.

How extensive are cardiovascular-renal diseases? This year, one of these diseases will be cited as the primary cause of death on more than 600,000 death certificates. That represents more than 40 per cent of the total. On many other cases, one of these diseases will be cited as a contributing cause.

Such figures can only mean that there are many times 600,000 in this country today in need of advice or treatment for these diseases. A regrettable proportion of them do not know there is anything wrong. We are learning what the early danger signs are: hypertension, mild albuminuria, and the like; but we have to spread the word that these are danger signs, because until they are recognized as such we shall not be able to take adequate measures to retard the disease. Just as the early discovery of tuberculous lesions aids so much in establishing a cure, so will the early discovery of these danger signals help in overcoming these diseases. The more we learn of the origin of a disease and its early progress, the better is our chance of learning how to prevent it or treat it. The earlier persons marked with these diseases come to your attention and care, the easier it will be to bring down the death rate, relieve suffering and prolong useful happy existence.

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* Read before the Society, October 9, 1940.

Is the death rate from circulatory disease increasing, and if it is, is it alarming? We have been told by eminent authorities that it is increasing alarmingly. We have been told by others that this is not the case. I am convinced that the death rate is not increasing and that the only thing that is alarming is the state of our statistics.

With the exception of certain infectious diseases followed on a case basis by Public Health Officials, our statistical knowledge of any disease is confined to the number reported dying of that disease. The deaths are tabulated by ages and related to the estimated population at those ages. This estimation is easy, but the figure for the number of deaths is only as good as the knowledge and accuracy with which the certificate was completed. In several respects these certificates and the death rates constructed from them are unsatisfactory, especially when we are interested in trends over a period of years.

In the first place, deaths have been classified according to three different lists in the last 25 years, and a fourth was just introduced this year. Each list reflects an advance made in medical science, but the change makes it almost impossible to follow trends of certain diseases consistently through three or four lists. (Cardiovascular-renal diseases as classified in each list are given in an appendix.)

In the second place, when a new classification is adopted it takes time before the new list is used consistently throughout the country.

In the third place, the designation of primary and contributory causes of death cannot be divorced from the times. Most of the attention of Public Health Officials and Vital Statisticians has in the past been directed toward diseases of an infectious nature, and with commendable results. But, now that more and more attention is being directed toward circulatory diseases, there will be a tendency, consciously or unconsciously, to name a circulatory disease as the primary cause of death when there are two or more conditions present, as there are in most cases. We have a vicious circle. More attention focused on heart disease begets more deaths ascribed to heart disease, and the more deaths, the higher the rate; and the higher the rate, the more attention it attracts.

Lastly, up to now it has been possible for a person to die of only one disease, statistically. A classification of death by both primary and secondary causes would multiply the work but would give a much clearer picture of the part played by a given disease than the single classification now used. It would also help to minimize the tendency noted just above.

These observations are not so much criticisms of the way in which vital statistics have been collected, as they are explanations of why we cannot give as detailed and exact an accounting of each kind of disease as we should like. The defect is not so apparent when we take a broad group such as is made up by putting all the cardiovascular-renal diseases together, because, for the most part, there has been no great shifting from one broad classification to another. It has mostly been within the cardiovascular-renal group that the changing of label has occurred.

Death rates may be presented in various ways. The total number of deaths in a community or country divided by the total population gives a crude death rate. Crude death rates are in general disrepute because it is so obvious that the age composition, especially, of population groups differs so from place to place and time to time that the crude death rate is not a reliable means of comparison.

Sometimes standardized death rates are used. These are rates made up by first making up a hypothetical population and then computing what the crude death rate would be if the death rates for each subdivision of the population by age, sex, etc., were as actually observed. This method has the advantage of yielding one figure, but it is not so revealing as the more direct approach I intend to use, of giving death rates over fairly narrow age groups.

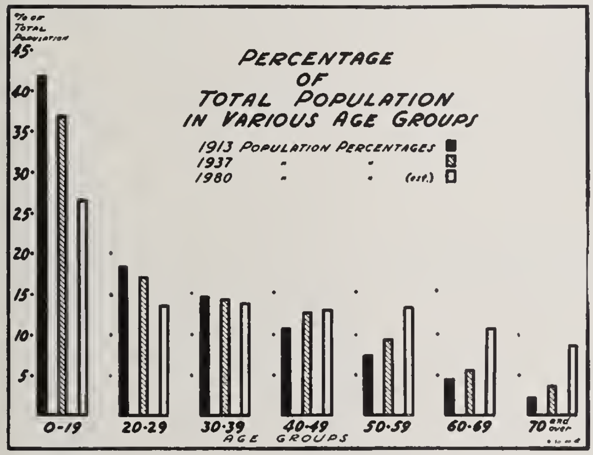

FIG. 1. Percentage of total population in various age groups

We have heard so much of how the population of the United States is "getting older"—on the average, that I should like to give you a picture of what age change is taking place and how important it is in the determination of crude, or over-all, death rates.

My study has been based on death rates for the years 1913–1937 inclusive, because the latter is the last year for which statistics have been fully published. We begin with 1913 because that gives us a range of 25 years. Figure 1 will give you some idea of how the population in 1913 had changed by 1937, and how it is estimated it may change by 1980.

How important these changes are may be illustrated by a few figures. The crude death rate for all causes in 1937 per 100,000 of population was 1,122. Cardiovascular-renal diseases accounted for 444 of these deaths, or almost exactly 40 per cent. With no change but a change in the age distribution of the population, we would find in 1980 a total death rate of 1,793, as compared with 1,122 in 1937, and a cardiovascular-renal death rate of 857 as compared with 444. Cardiovascular-renal diseases would have jumped from 40 per cent of the total to 48 per cent of the total without any change in either the total death rate or the cardiovascular-renal death rate at any age. Let us hope that by 1980 there will be no statisticians who would "view with alarm" the increase of almost 100 per cent in the cardiovascular-renal death rates.

Before I show you my cardiovascular-renal death rates I want to show you what has happened to the total death rate for all causes from 1913 to 1937.

Table 1 gives death rates per 100,000 of population in each of seven age groups. We see that there has been a decrease in each age group, with the biggest reduction coming at the younger ages. A little later I shall show complete figures for certain of these age groups over this 25-year period, so that there will be no feeling that the relationship shown in this table is peculiar to the years selected.

There is no reason to be alarmed by this picture. As long as the death rate for all causes does not increase at the older ages, I shall be skeptical of any figures that show great increases in the death rate from circulatory diseases.

We now see in table 2 what has happened to cardiovascular-renal death rates from 1913 to 1937. Again we see that there have been decreases at all ages except 60 and over, and even there the increase is so small it could not be called alarming.

This table illustrates a statistical phenomenon that may trouble you. In spite of the fact that most age groups show decreases, we have a 24 per cent increase in the rate for all ages combined. The explanation lies in the fallacy inherent in crude rates, as explained above. The figure for 1913 represents an average of the age group figures weighted by the population in each age group in 1913. Similarly, for the 1937 figure, but the weights (population at age groups) had so changed that the increased rate at 70 and over more than balanced all the decreases at the younger ages.

In table 3 the percentage changes shown in tables 1 and 2 are brought together, from which we can see that while there has been some improvement in the cardiovascular-renal death rate, it has not, except at ages under 40, kept pace with the improvement in the total death rate.

TABLE 1

Deaths from All Causes

AGES	DEATH RATES PER 100,000		CHANGE
	1913	1937	
0–19	1,065	446	58% decrease
20–29	587	338	42 “
30–39	809	491	39 “
40–49	1,204	851	29 “
50–59	2,046	1,665	19 “
60–69	3,950	3,630	8 “
70–over	11,140	9,569	14 “
All	1,410	1,122	20% decrease

TABLE 2

Deaths from Cardiovascular-Renal Diseases

DEATH RATES PER 100,000		CHANGE
1913	1937	
53	25	53% decrease
55	33	39 “
130	86	34 “
310	260	16 “
750	695	7 “
1,853	1,865	1 increase
5,540	5,796	5 “
363	448	24% increase

TABLE 3

Changes in Rates of Mortality

(1937 over 1913)

ALL CAUSES	CARDIOVASCULAR-RENAL DISEASES
−58%	−53%
−42	−39
−39	−34
−29	−16
−19	−7
−8	+1
−14	+5
−20%	+24%

Figure 2 is designed to show how misleading crude death rates can be. It shows the death rate for all ages combined from heart disease over the 25-year period. The explanation of the steep rise lies in the aging of the population and the fact that in the later years some deaths have been called heart deaths that would have been called something else in the earlier years.

Figures 3, 4 and 5 compare total death rates and cardiovascular-renal death rates over the 25-year period for three age groups, 20–29, 40–49 and 60–69. I believe the trends indicated by these curves justify my use of the two years 1913 and 1937 for my comparisons.

When we try to break down the cardiovascular-renal death rate into the various subdivisions, we run into difficulty, because, over the period of years in question, the basis of classification has been changed twice and other changes in style and diagnosis are apparent from the statistics. There just is no good statistical answer to some of the questions we would like to have answered about the mortality from heart disease.

The next four figures show for ages 40–49 what has happened to the death rate from chronic nephritis (fig. 6), cerebral hemorrhage (fig. 7), acute endocarditis, etc. (fig. 8), (note the varying interpretation over the years!), and angina and coronary artery disease (fig. 9). Only since 1930 has coronary artery disease been recognized as an entity in the classification of deaths. It illustrates in marked degree what has happened throughout the list of causes of death. Since 1930 the rate has shot upward, not because more persons died of coronary artery disease, but because some deaths that in years past could have been labeled "angina" or "myocardial degeneration," etc., were diagnosed as coronary artery disease.

I am indebted to Dr. Francis P. Denny, Health Officer of Brookline, Massachusetts, for the clearest picture of what is happening to the death rate from coronary artery disease. Table 4 is taken from his paper, "The Increase in

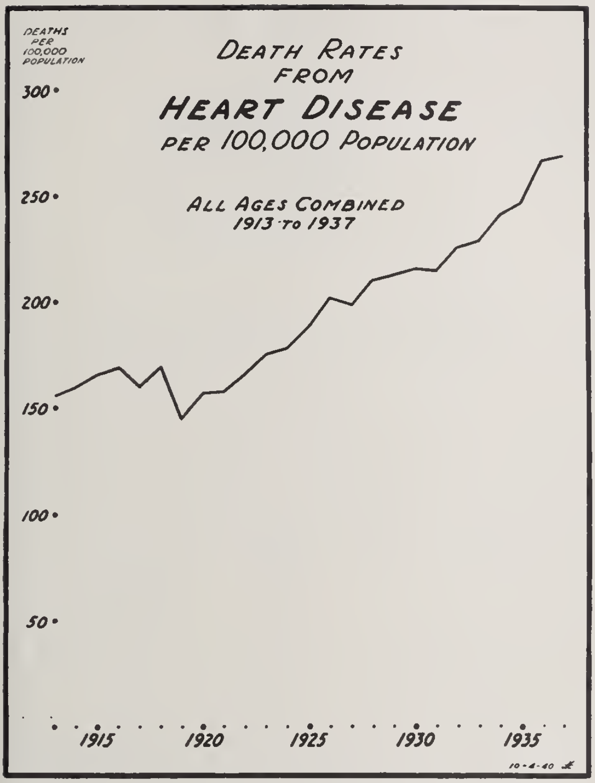

FIG. 2. Death rates from heart disease per 100,000 population

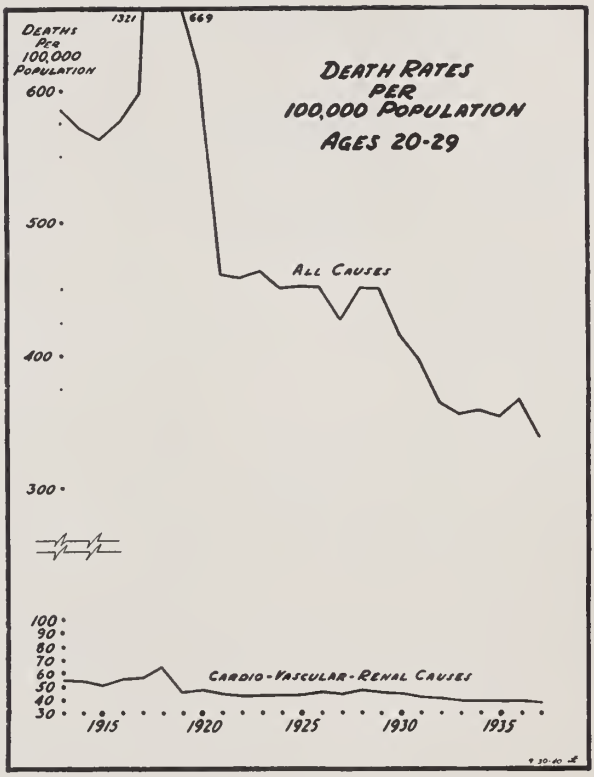

FIG. 3. Death rates per 100,000 population, ages 20–29

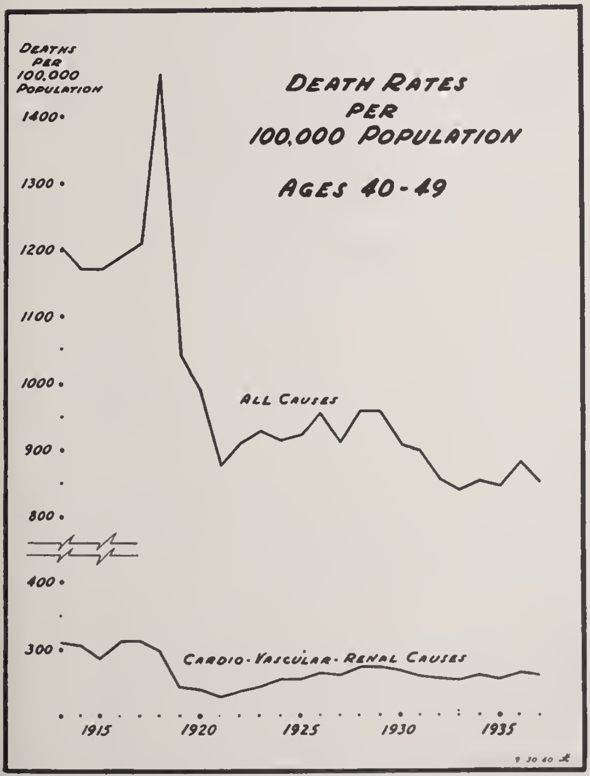

FIG. 4. Death rates per 100,000 population, ages 40–49

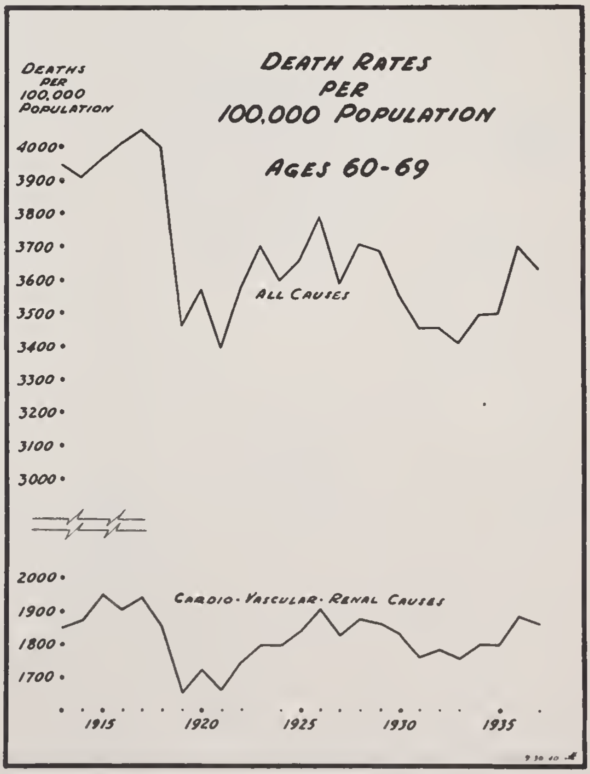

FIG. 5. Death rates per 100,000 population, ages 60–69

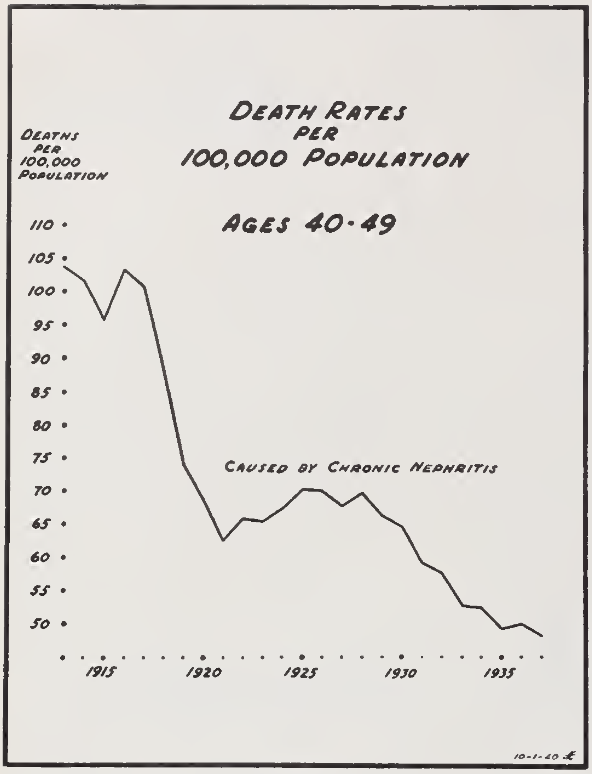

Fig. 6. Death rates per 100,000 population caused by chronic nephritis, ages 40–49

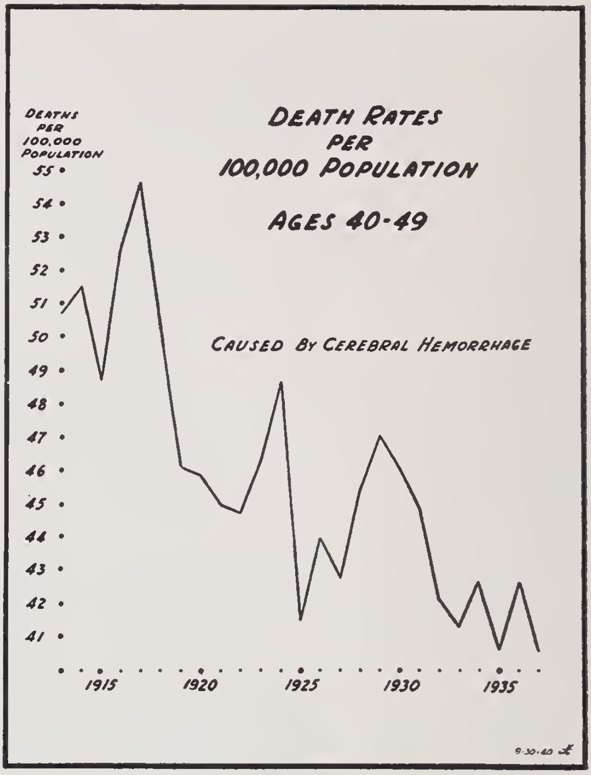

Fig. 7. Death rates per 100,000 population caused by cerebral hemorrhage, ages 40–49

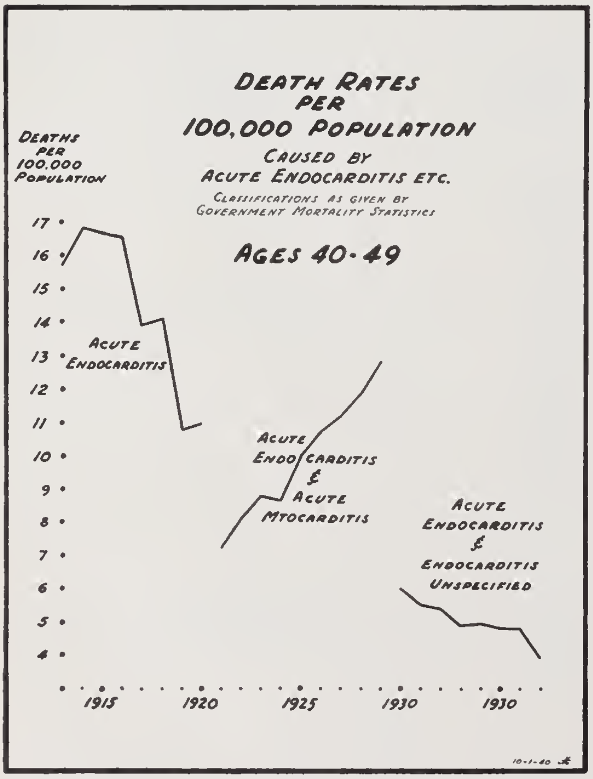

Fig. 8. Death rates per 100,000 population caused by acute endocarditis, etc., ages 40–49

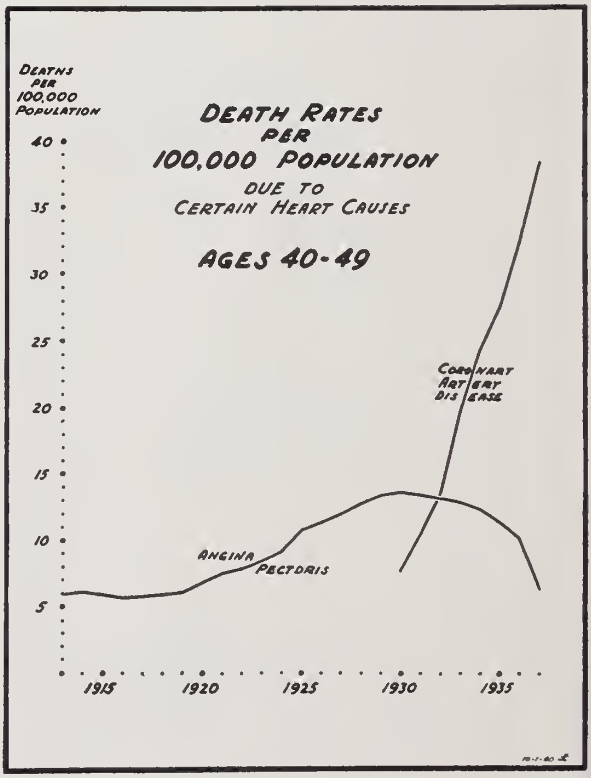

Fig. 9. Death rates per 100,000 population due to certain heart causes, ages 40–49

Coronary Disease and Its Cause" (New England Journal of Medicine, Vol. 214, No. 16, page 769), supplemented, for the last quinquennium, by a personal communication.

TABLE 4

Heart Disease in Brookline 1900-1939

Death Rates per 100,000

PERIOD OF YEARS	ENDO-CARDITIS	MYO-CARDITIS	OTHER DISEASES	ANGINA PECTORIS	CORONARY DISEASE	ALL FORMS
1900-'04	51.1	24.1	62.3	16.7	0	154.2
'05-'09	93.5	33.8	47.1	22.8	3.9	201.2
'10-'14	97.1	56.0	47.1	24.5	4.1	228.9
'15-'19	67.6	89.5	23.8	28.2	9.9	219.0
'20-'24	66.6	115.1	28.9	27.3	13.7	251.7
'25-'29	56.4	127.4	36.4	36.4	39.9	296.7
'30-'34	46.3	117.1	26.6	22.9	94.6	307.4
'35-'39	33.3	108.9	45.4	11.2	172.5	371.4

These are crude death rates, and so are subject to distortion from the aging of the population, but they illustrate very strikingly the effect of more accurate diagnosis. As the number of deaths reported from coronary disease per 100,000 increased, the number reported from myocarditis and angina pectoris decreased; Dr. Denny says in his paper, "It was noticeable that when a given physician had once used the term 'coronary thrombosis' the diagnosis of 'angina' seldom or never again appeared on his certificates."

Furthermore, the death rate from coronary disease reported in Brookline is much higher than that obtained from the United States Census figures, which increased from 8.0 in 1930 to 45.7 in 1937. I think it is reasonable to attribute this largely to the fact that diagnosis of coronary disease in Brookline is more accurate than that in the country as a whole. The difference between these rates suggests that as the skill of physicians all over the country in recognizing coronary disease increases, we may expect a still further increase in the coronary death rate from this reason alone.

We sometimes hear it said that we must expect an increased death rate from the degenerative diseases because so many more people now survive to the older ages. It is probably true that the death rate from degenerative diseases may show some increase as the infectious diseases are better controlled, because some persons who have degenerative diseases and would formerly have been taken off prematurely by some infectious disease now live on to die of their cardiovascular-renal impairment. But this increase in the death rate from degenerative disease does not necessarily mean that more are suffering from the disease. I cannot see why a generation which is brought through its early years without contracting serious infectious disease doesn't stand a better chance of withstanding the afflictions of later life than the earlier generation that had to survive, as a matter of course, practically all the infectious diseases. We must remember that in basing conclusions on death rates in 1937 our population at 70 and over was born before 1867 and our population at 60-69 was born between 1868 and 1877, but that in the year 2000 the death rate at 60-69 will be formed from the experience of those born in the last decade. I shall be disappointed if we do not continue to have some improvement in the death rate at the older ages as well as at the younger ages.

After all my digging into these vital statistics, I am faced with the necessity of basing my conclusions on impressions and surmises rather than on solid facts. I am convinced that:

1. Since the death rate from all causes has not increased, even at the older ages, there is reason to doubt that there has been any real increase in the death rate from circulatory diseases.
2. Since a large part of our statistical difficulty lies in the changing names given the various circulatory diseases, our best picture as a whole is obtained by seeing what has happened to the cardiovascular-renal death rate as a whole, and that in turn shows no tendency to increase except possibly at ages over 70.
3. The improvement in mortality of heart diseases of an infectious type parallels the

TABLE 5

DESCRIPTION OF CLASS	ACTUAL DEATHS	EXPECTED DEATHS	RATIO
Medical Impairment Study (1929) Policies Issued 1909–1927 observed to 1928			
A. *Apex murmur, systolic, constant*			
1. Not transmitted to left			
No hypertrophy	250	166.89	150%
Slight hypertrophy	39	19.44	201
(Deaths from organic heart disease were 5 times normal and there were 25 deaths from myocarditis, endocarditis, and pericarditis against less than 2 expected)			
2. Transmitted to left, no history of infection			
No hypertrophy	1,231	549.08	224%
Slight hypertrophy	394	168.45	234
Moderate hypertrophy	196	41.20	476
(Deaths from organic heart disease were 8½ times normal and there were 223 deaths from myocarditis, endocarditis, and pericarditis against less than 6 expected. There were 29 from embolism and thrombosis against less than 1 expected. Deaths from pneumonia were 2¼ times normal, deaths from influenza 1¾ times normal)			
3. Transmitted to left, with history of			
(a) Rheumatism			
No hypertrophy	307	92.63	331%
Slight to moderate hypertrophy	158	37.42	422
(b) Tonsillitis, Chorea, Measles, Typhoid, Scarlet Fever, etc.			
No hypertrophy	103	54.60	189%
Slight to moderate hypertrophy	34	19.53	174
(Deaths from organic heart disease were 15 times normal and there were 65 deaths from myocarditis, endocarditis, and pericarditis against less than 2 expected. There were 8 from angina against less than 1 expected. Deaths from pneumonia were 4 times normal, deaths from influenza 1¾ times normal)			
B. *Apex murmur, systolic, inconstant*			
No hypertrophy	102	97.73	104%
Slight hypertrophy	11	6.26	176
(In the group without hypertrophy, deaths from organic heart disease were 2 times normal)			
C. *Apex murmur, systolic, not clearly in foregoing classes*			
No hypertrophy	657	315.18	208%
Slight hypertrophy	117	50.98	230
Moderate hypertrophy	72	20.46	352
(Deaths from organic heart disease were 11 times normal and there were 23 deaths from myocarditis, endocarditis, and pericarditis against less than 1 expected. Deaths from pneumonia were 2 times normal)			
D. *Apex murmur, presystolic or diastolic, constant*			
No hypertrophy	41	8.55	480%
Slight hypertrophy	20	2.49	803
(Deaths from organic heart disease were 21 times normal and there were 18 deaths from myocarditis, endocarditis, and pericarditis against less than 1 expected)			
E. *Basic murmur, aortic area, systolic, constant, not transmitted*			
No hypertrophy	35	26.70	131%
(No cause of death was significant)			

TABLE 5—*Concluded*

DESCRIPTION OF CLASS	ACTUAL DEATHS	EXPECTED DEATHS	RATIO
Medical Impairment Study (1929)—*Continued* Policies Issued 1909-1927 observed to 1928—*Continued*			
F. *Basic murmur, aortic area, systolic, constant, transmitted upward*			
No hypertrophy	134	52.20	257%
Slight or moderate hypertrophy	78	16.32	478
(Deaths from organic heart disease were 12 times normal and there were 36 deaths from myocarditis, endocarditis, and pericarditis and 8 deaths from embolism and thrombosis against less than 1 expected from all five of these causes)			
G. *Basic murmur, aortic area, diastolic, constant, transmitted downward*			
No hypertrophy	34	7.40	457%
Slight hypertrophy	17	3.80	447
(There were 16 deaths from organic heart disease against less than 1 expected)			
H. *Basic murmur, pulmonic area, systolic, constant, not transmitted*			
No hypertrophy	189	184.99	102%
(Deaths from organic heart disease were 2½ times normal and there were 8 deaths from myocarditis, endocarditis, and pericarditis against less than 2 expected)			
Medical Impairment Study (1938) Policies Issued 1925–1936 observed to 1937			
A. Intermittent pulse			
Under 5 a minute	139	107.50	129%
5–10 a minute	86	57.67	149
Over 10 a minute	25	22.50	111
B. Irregular pulse			
Under 5 a minute	62	35.31	176%
5–10 a minute	31	—	169
Over 10 a minute	9	—	165
(Deaths from organic heart disease were 2 times normal in the intermittent group, 2½ times normal in the irregular group. Most of the heart deaths were from endocarditis and disease of the coronary arteries)			

improvement in infectious diseases generally.

4. Diseases of a degenerative nature have probably not decreased, but we cannot say they have really increased much, and can't find any logical reason why they should.
5. There is therefore no cause for alarm.
6. There is, however, an increasing number of persons who should be receiving advice and treatment for early impairments of the circulatory system.

Life insurance companies are not usually in a position to furnish much in the way of statistics of the kind I have been considering up to now. Their death certificates are no more accurate than the official report. They are, too, primarily interested in the death rate as a whole and not the death rate from any particular cause. Insurance statistics therefore consist mainly of studies of how the mortality of a group showing certain characteristics compares with the mortality of a normal or average group. Such studies are indispensable in determining what risks may safely be accepted in spite of some abnormal feature and what risks must not be accepted.

Table 5 shows the experience of a number of life insurance companies with certain circulatory abnormalities. Some of these, as you will see, resulted in a greatly increased mortality rate, while others did not appreciably affect the rate. In general, the results are consistent with what we might expect to find. Please note, however, that not all of the increased mortality is accounted for by deaths primarily attributed to circulatory ailments. Some of the excess mortality appears as due to various diseases, the impaired heart being a contributing factor.

TABLE 6

Blood Pressure Study—1939

Policies Issued to Men, 1935–1937 inclusive, observed to 1938

% Ratio of Actual to Expected Deaths

	SYSTOLIC READING—MM	DIASTOLIC READING (FIFTH PHASE)—MM							
		64-73	74-83	84-88	89-93	94-98	99-103	104-108	Total
Ages 10–29	108–117	Not Studied		126	—	—	—	—	119
	118–127	Not Studied		103	113	132*	—	—	105
	128–132	101	100	101	107	160*	—	—	102
	133–137	90*	78	101	127	—	—	—	98
	138–142	—	106	96	128	—	—	—	109
	143–147	—	—	—	—	—	—	—	92*
	148–157	—	—	—	—	—	—	—	177*
	Total	102	97	103	115	145	—	—	104
Ages 30–39	108–117	Not Studied		73*	—	—	—	—	76
	118–127	Not Studied		93	115	106*	—	—	97
	128–132	93	95	107	125	117	—	—	103
	133–137	86*	119	120	153	160	—	—	127
	138–142	123*	107	121	142	198	284*	—	135
	143–147	—	—	152*	144	205	—	—	152
	148–157	—	—	—	193*	246*	308*	—	202
	158–167	—	—	—	—	—	—	—	414*
	Total	94	100	104	132	165	247	—	111
Ages 40–49	108–117	Not Studied		94	—	—	—	—	96
	118–127	Not Studied		86	103	122	—	—	90
	128–132	93	95	98	103	107	—	—	97
	133–137	111	103	109	118	139	—	—	112
	138–142	121	119	130	146	170	166	—	138
	143–147	—	146	142	176	225	168*	—	175
	148–157	—	204	196	212	223	304	411*	229
	158–167	—	—	—	221*	408	421	—	346
	Total	100	102	104	127	173	230	301	114
Ages 50 and over	108–117	Not Studied		123	—	—	—	—	119
	118–127	Not Studied		72	78	122*	—	—	74
	128–132	83	85	93	92	98	—	—	89
	133–137	84	91	96	97	100	95*	—	94
	138–142	104	101	106	118	132	118	—	111
	143–147	119*	131	118	125	140	150	—	128
	148–157	115*	130	152	148	180	213	213	162
	158–167	—	185*	171	192	218	211	326	209
	168–177	—	—	—	—	—	—	—	226*
	Total	90	94	100	113	141	167	216	107

* Actual deaths 25–49; if less than 25, ratio not shown.

These results are perhaps more striking when it is recalled that these people were all pursuing a normal active existence at the time they were insured. They were not under treatment, and in many cases were not aware that they had any impairment.

A number of companies have completed a study that is just about to be published, dealing with hypertension; not the kind you are called on to treat, but the kind that is hardly considered abnormal outside of insurance circles. The lives included in this study were perfectly normal except for the blood pressure and except for certain relatively insignificant other minor abnormalities.

Table 6 shows mortality ratios by both systolic and diastolic pressure, the first time such a table has been available. It is clearly demonstrated that even a moderate degree of hypertension increases the mortality rate. It shows also that with a given systolic pressure the mortality is higher if the diastolic is also high than if the diastolic is nearer normal.

A blood pressure of 140/90 at the age of 45 should not be regarded as normal when it results in a mortality rate nearly 1½ times the average.

Perhaps the greatest contribution the life insurance companies can make to the war on circulatory diseases is the proof that these abnormalities that do not appear important to a clinician are nevertheless indicative of coming trouble. By spreading such knowledge we will increase the chance of really doing something for lives so impaired.

The progress made in recent years is great. The attention which you and other doctors are giving to this problem cannot help but result in further great progress.

APPENDIX

Cardiovascular-Renal Diseases

1913–20 Classification	*1921–29 Classification*	*1930–39 Classification*
Congenital Malformations of the Heart	Congenital Malformations of the Heart	Congenital Malformations of the Heart
Pericarditis	Pericarditis	Pericarditis
Acute Endocarditis	Acute Endocarditis and Acute Myocarditis	Acute Endocarditis
Organic Heart Diseases	Angina Pectoris	Endocarditis Unspecified
Angina Pectoris	Other Heart Disease	Chronic Endocarditis
Misc. Circulatory (Int'l List 81–85)	Misc. Circulatory (Int'l List 91–96)	Acute Myocarditis
Cerebral Hemorrhage	Cerebral Hemorrhage	Myocarditis Unspecified if under age 45
Chronic Nephritis and Nephritis Unspecified	Chronic Nephritis and Nephritis Unspecified	Chronic Myocarditis; Myocardial Degeneration
		Other Myocardial Disease
		Angina Pectoris
		Disease of the Coronary Arteries
		Functional Disease of the Heart
		Other Unspecified Heart Disease
		Misc. Circulatory (Int'l List 96–103)
		Cerebral Hemorrhage
		Chronic Nephritis and Nephritis Unspecified

APPENDIX

1939

Classification

Cardiovascular-Renal Diseases

- XIV. Congenital Malformations
  - 157. Congenital malformations of the cardiovascular system
    - e. Congenital malformations of the heart
    - f. Other congenital malformations of the cardiovascular system
- III. Rheumatism, Diseases of Nutrition and of the Endocrine Glands, Other General Diseases and Avitaminoses
  - 58. Acute rheumatic fever
    - a. Acute rheumatic pericarditis
    - b. Acute rheumatic endocarditis
    - c. Acute rheumatic myocarditis
    - d. Other acute rheumatic heart diseases
- VII. Diseases of the Circulatory System
  - 90. Pericarditis (except acute rheumatic)
    - a. Chronic rheumatic pericarditis
    - b. Other pericarditis
  - 91. Acute endocarditis (except rheumatic)
    - a. Bacterial endocarditis (acute, subacute, or unspecified)
    - b. Other acute or subacute endocarditis
    - c. Endocarditis (not specified as acute, chronic or rheumatic, under 45 years of age)
  - 92. Chronic affections of the valves and endocardium
    - a. Diseases of the aortic valve (without mention of diseases of the mitral valve or rheumatic fever)
    - b. Diseases of the mitral valve (whether or not specified as rheumatic)
    - c. Diseases of other and unspecified valves and chronic endocarditis, specified as rheumatic
    - d. Diseases of other and unspecified valves and chronic endocarditis, not specified as rheumatic
    - e. Endocarditis (not specified as acute, chronic or rheumatic, 45 years of age and over)
- I. Infections and Parasitic Diseases
  - 30. Syphilis
    - d. Aneurysm of the aorta
    - e. Other syphilis of the circulatory system
- VII. Diseases of the Circulatory System
  - 93. Diseases of the myocardium
    - a. Acute myocarditis (except rheumatic)
    - b. Myocarditis (not specified as acute, chronic or rheumatic, under 45 years of age)
    - c. Chronic myocarditis and myocardial degeneration, specified as rheumatic
    - d. Chronic myocarditis and myocardial degeneration, not specified as rheumatic
    - e. Other myocarditis (not specified as acute, chronic or rheumatic)
  - 94. Diseases of the coronary arteries and angina pectoris
    - a. Diseases of the coronary arteries
    - b. Angina pectoris
  - 95. Other diseases of the heart
    - a. Functional diseases of the heart (without mention of organic lesion)
    - b. Other diseases of the heart, specified as rheumatic
    - c. Other diseases of the heart, not specified as rheumatic
  - 97. Arteriosclerosis (except coronary or renal sclerosis)
  - 96, 98–103. Miscellaneous circulatory diseases, especially of the veins and arteries
- VI. Diseases of the Nervous System and Sense Organs
  - 83. Intracranial lesions of vascular origin
    - a. Cerebral hemorrhage or effusion (excluding birth injuries)
- X. Diseases of the Genitourinary System
  - 131. Chronic nephritis
    - a. Arteriosclerotic kidney

Rubber for artificial ears and noses. A new rubber compound is the most satisfactory material yet devised for the making of artificial ears and noses, ARTHUR H. BULBULIAN, D.D.S., Rochester, Minn., points out in *Hygeia, The Health Magazine* for November, 1940.

Emphasizing the difficulty of finding a suitable material which closely resembles a normal ear or nose, he says that such substitutes must have the appearance of normal skin, with the color, flexibility and translucency of normal skin, and the line of junction between the patient's skin and the new nose or ear must not be too conspicuous. The new nose or ear must be made of some substance that will not irritate the skin and must be a poor conductor of heat. It must also be inexpensive, light in weight, fairly permanent and unaffected by heat and cold.

The new rubber compound which has been so successful is obtained in creamy liquid form and it remains creamy until it has been allowed to dry in air or in a plaster of paris mold. To this material can be added suitable dyes to give it natural skin color. "With this material," the author says, "it is now possible to make a nose or an ear which is not readily noticed unless it is examined carefully. But many difficulties in regard to color and translucency have to be overcome before life-like texture can be obtained."

THE IMPORTANCE OF HEART DISEASE

THE CARDIOVASCULAR SITUATION TODAY, PRESENT AND PROBABLE FUTURE TRENDS*

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Mr. Shepherd has discussed with you the trend of events in the field of cardiovascular disease during the last 25 years and has given you the result of his analysis, which indicates that the reported increase in the cardiovascular death rate is more apparent than real. In continuing the discussion of the subject, "The Importance of Heart Disease," assigned to us by your Chairman, I shall confine my study to the cardiovascular situation today and discuss briefly some of the present and probable future trends.

In his discussion, Mr. Shepherd has brought to your attention the difficulties which arise in any analysis of cardiovascular mortality statistics because of the ever-changing nomenclature. Three revisions of the International List of Causes of Death have been made during the last 20 years, and the 1939 revision has just been placed in effect this year. These revisions are significant. They indicate that new information is being accumulated so rapidly that any classification developed is outmoded almost before it becomes universally known and placed in active use, and before we can gather sufficient material to support the concepts on the basis of which the classification was originally formulated.

As a result of this increasing information, our fundamental concepts of cardiovascular disease are constantly changing. We are forced to discard those concepts which newer developments have proven erroneous, we have to revise our line of thought continually, and we have to prepare ourselves for the changes which are bound to come in the future. Such changes denote progress, and progress in the cardiovascular field is bound to redound to the benefit of those who are so unfortunate as to be afflicted with cardiovascular impairments.

In the ever changing picture before us, one of the most encouraging trends is the emphasis which is being placed on etiology. In our study of cardiovascular conditions we can think clearly and reason soundly only when we fully understand the underlying pathologic processes. As these pathologic processes are comparatively few in number and kind, the trend will be toward simplification of all classification of cardiovascular conditions. So simple will the classification become that we shall eventually be able to place almost all cardiovascular conditions in three main categories:

1. the congenital,
2. the infectious, and
3. the arteriosclerotic.

The 1939 revision of the International List of Causes of Death has recognized the importance of etiology and has for the first time made it possible for us to record in separate, well-defined groups deaths due to rheumatic heart disease and to cardiovascular syphilis. Deaths due to these causes have previously been recorded in more general groups, nonetiologic in character, and, as a result, have been lost for statistical purposes. In this classification, the arteriosclerotic groups are also better defined, and we shall now, for the first time, be able to record separately chronic kidney conditions due to infection and those due to arteriosclerosis, which have previously been grouped together.

This emphasis on etiology has clarified thought, particularly in the infectious and arteriosclerotic types of cardiovascular disease. In the infectious group, this emphasis has led to a better distinction between

1. Those infections in which the infectious agent directly invades the structures of the heart and aorta, as in rheumatic heart disease, cardiovascular syphilis, and the

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* Read before the Society October 9, 1940.

various types of acute pericarditis, and acute and subacute endocarditis, and

2. The effects on the myocardium of infections elsewhere in the body, as, for example, in pneumonia.

In the latter group, where we are concerned only with the toxic effect on the myocardium, and where no tissue destruction occurs, we have learned that the heart recovers promptly and completely, as do the other tissues of the body, and that there are usually no permanent residual effects. Reasoning from the fact that the myocardium recovers so rapidly and so well from such a serious toxemia as occurs in a pneumonia, we shall better be able to evaluate the effect on the heart of less severe toxemias accompanying other less virulent extracardiac infections.

In those infections, however, in which invasion of the delicate structures of the heart and aorta occurs, where structural damage results, and where there is reinfection or continued infection, as in rheumatic heart disease and cardiovascular syphilis, we still have major cardiovascular problems.

It is not within the scope of this paper to discuss any one of these infections or the effect in general of infections on the cardiovascular system. We may note, however, that as a direct result of the success in recent years in the prevention and treatment of all infections, there has been a marked decrease in frequency and severity of all infectious processes. As a result, the heart and all cardiovascular structures are being exposed

1. to less frequent, less intense, and less prolonged toxemias from extracardiac infection, and
2. to less frequent direct invasion of the heart by infection.

Coincident with the growing control over all infectious processes, we have every right to hope for a decline in all infections involving the cardiovascular system. As a result of the campaign for the prevention and treatment of syphilis, cardiovascular syphilis should become less and less prevalent and eventually be eradicated. With rigid application of the principles which guide us in the control of all infections, with improvement in general economic conditions, and with better treatment of those who develop rheumatic fever, we should gain control over that infection also and be able to hope for a decline in the incidence of rheumatic heart disease.

We have no reliable figures, however, to show that either rheumatic heart disease or cardiovascular syphilis or other cardiovascular infections are on the decline. Mr. Shepherd has shown that there has been a marked decline in the death rate from all cardiovascular disease in all age groups under 40. In view of the fact that most cardiovascular deaths below 40 are from rheumatic heart disease, it may be that there is already a trend downward in the number of deaths due to rheumatic heart involvement.

Dr. Hedley of the United States Public Health Service has reported a rheumatic death rate between 25 and 30 per 100,000 of the population in Philadelphia in 1936. He estimated that the incidence of rheumatic heart disease in the entire population was between 0.5 and 1.0 per cent, and that there were probably 40,000 deaths annually in the United States from rheumatic heart disease. These figures indicate that rheumatic heart disease is the major problem in the group of infectious cardiovascular conditions, and that there can be no let-up in the fight on rheumatic fever, which, it would seem, should eventually yield to control.

Emphasis on etiology has also given us a better understanding of arteriosclerotic heart disease in general, and a better perspective in which to see all the local manifestations of that process. Twenty years ago we had no working knowledge of such an important representative of this group as coronary artery disease. This classification was not added to the International List of Causes of Death until the 1929 revision.

We have learned to recognize arteriosclerosis today as a process which affects all of us if we live long enough to develop it. We know that it may begin to develop early, even in the thirties; that it always progresses, slowly in some individuals, more rapidly in others, particularly when associated with hypertension; that it eventually affects the entire arterial tree, narrowing and closing vessels in varying degree and impairing the circulation to the tissues supplied by the affected vessels, with resulting impairment of function and final degeneration of those tissues.

In the light of this concept, we shall better understand all the local manifestations of arteriosclerosis. We shall better understand

1. Coronary artery disease when we look upon it as a sclerosis of the coronary arteries which so affects the blood supply to the myocardium as first to impair its function and later cause degeneration. We shall see that degenerative process not as a chronic myocarditis, but in the light of its etiology as the result of coronary sclerosis, and we shall properly classify it with the coronary artery sclerosis group.
2. We shall look upon cerebral hemorrhage not as a disease of the nervous system, as it is classified in the International List, but in the light of its etiology as an arteriosclerosis of the cerebral vessels, and we shall group with that vascular process all those conditions caused by degeneration of the cerebral structures affected by that sclerosis.
3. We shall look upon most of those conditions in the upper age group now classified as chronic nephritis as an arteriosclerosis of the renal vessels, with degeneration of the kidney structures resulting from this localized arteriosclerosis.
4. Gangrene and all disturbances of the extremities in the upper age group will also be looked upon in their true light as the result of arteriosclerosis, with narrowing or closure of the vessels to the affected parts.

There has been much discussion in recent years as to whether diabetes mellitus causes arteriosclerosis or whether arteriosclerosis may not be a fundamental factor in the production of the diabetic manifestations in the upper age groups. The trend of thought seems to be in the latter direction, to consider the diabetes of the older groups fundamentally of arteriosclerotic origin. The fact that so few of these patients die in coma, and that so many of them die of arteriosclerotic conditions would seem to lend support to this trend of thought and to suggest that many of these deaths should, therefore, be included in the arteriosclerotic group.

The latest mortality figures may assist in picturing to us how many of our current cardiovascular deaths are due to the arteriosclerotic manifestations described. These figures will also show to some extent the relative importance of the congenital group, but they are disappointing in disclosing the information which we should like to have regarding the number of deaths due to rheumatic heart disease and to cardiovascular syphilis. The figures presented are the latest complete figures available, those of the year 1937, compiled by the Office of Vital Statistics of the Bureau of the Census, and cover the United States Registration Area.

TABLE 1

Circulatory Diseases

Int'l List 90–103

Number of Deaths in 1937

AGES	NUMBER
0–19	4,754
20–29	5,089
30–39	10,723
40–49	28,302
50–59	55,509
60–69	90,136
70 and over	181,069
	375,582

Table 1 shows the total number of deaths in 1937 attributed to circulatory diseases. The figures given do not include deaths from congenital heart disease, rheumatic fever, cerebral hemorrhage, chronic nephritis and diabetes mellitus. These will be added later in order to complete the cardiovascular mortality picture for the year.

The total deaths, 375,582, are broken down into their age groups. The marked predominance of deaths in the upper age group is apparent. Almost 50 per cent are in the group 70 years and over, more than 80 per cent are over age 50, and less than 5 per cent are under age 40. This chart does not give us any information regarding the component groups which combine to give this total.

Table 2 shows the deaths in 1937 attributed to congenital heart disease, one of the groups not included in the total in table 1.

TABLE 2

Congenital Hearts

Int'l List 157c

Number of Deaths in 1937

AGES	NUMBER
Under age 1	5,039
1– 4	334
5– 9	110
10–14	113
15–19	85
20–29	88
30 and over	91
	5,860

There were relatively few deaths, 5,860, and it should be noted that most of the deaths occurred during the first year. This chart does not give any information regarding the number of individuals who have congenital lesions compatible with life, conditions which present such difficult differential diagnostic problems.

Table 3 shows the deaths in 1937 attributed to acute rheumatic fever.

The total is small, 1,958, and shows the age distribution which we would expect, with the maximum number of deaths in the 10–19 year age group and with over 50 per cent of the deaths occurring under age 30. The figures do not give any information regarding the incidence of rheumatic fever or the resulting rheumatic heart disease. This information is not available except from the estimates already referred to, which are based on studies of local groups.

TABLE 3

Acute Rheumatic Fever

Int'l List 56

Number of Deaths in 1937

AGES	NUMBER
0– 9	331
10–19	525
20–29	248
30–39	195
40–49	187
50–59	137
60–69	162
70 and over	173
	1,958

Table 4 shows the number of deaths, 46,892, in 1937 attributed to chronic endocarditis.

TABLE 4

Chronic Endocarditis

Int'l List 92ac

Number of Deaths in 1937

AGES	NUMBER
0– 9	454
10–19	1,157
20–29	1,569
30–39	2,598
40–49	4,270
50–59	6,526
60–69	9,910
70 and over	20,408
	46,892

We had hoped that this group, which includes all deaths due to valvular heart lesions, would be representative of the number of deaths from rheumatic heart disease, excluding those occurring during the acute course of rheumatic fever. The age distribution, however, with so large a proportion of deaths occurring over age 70, indicates that the group must be a mixed one and contains many deaths due to arteriosclerosis.

Table 5 is a composite table showing the deaths in 1937 attributed to coronary artery disease, a total of 69,758, distributed according to age groups. To this group of apparently definite coronary deaths has been added the number of deaths attributed to chronic myocarditis and allied causes, a total of 215,905. This information is also presented in graph form in figure 1.

TABLE 5

Disease of the Coronary Arteries

Int'l List 94ab, 93cde, 95b

Number of Deaths in 1937

AGES	DEFINITE CORONARY DISEASE	PROBABLE CORONARY DISEASE	TOTAL
0–19	102	1,811	1,913
20–29	385	1,891	2,276
30–39	1,820	4,443	6,263
40–49	7,382	13,732	21,114
50–59	14,884	29,524	44,408
60–69	20,571	52,108	72,679
70 and over	24,614	112,396	137,010
	69,758	215,905	285,663

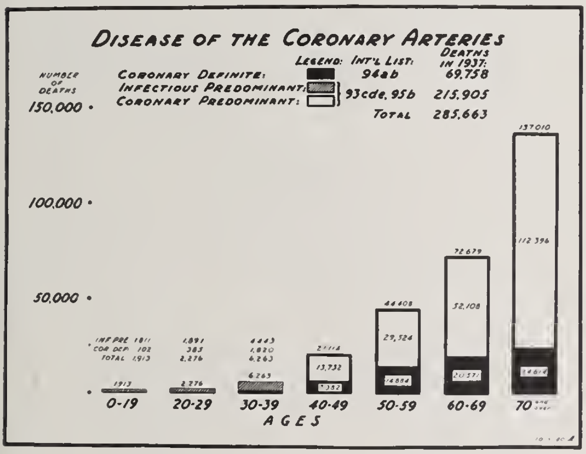

FIG. 1. Disease of the coronary arteries

There has been much interest and speculation in the last few years whether there has been any appreciable increase in the number of deaths from coronary disease and, if so, to what cause this increase might be attributed. Deaths from coronary disease have been recorded only since 1930, and during each subsequent year the total attributed to this cause has increased. The figure for 1938 was 77,444, as compared with the 69,758 given above for 1937.

I have previously indicated that most of the deaths attributed to chronic myocarditis are, in reality, due to myocardial degeneration secondary to coronary sclerosis and should, therefore, from the standpoint of etiology, be grouped with the deaths from coronary disease. As truer values in diagnosis are established and as etiology is emphasized, this transfer of the chronic myocarditis group to the coronary group will undoubtedly be made. It is probably now being made, accounting for the rapid increase already noted, and will continue, giving an apparent but not real rise in deaths from coronary disease, until the more accurate diagnoses absorb most of the entire chronic myocarditis group. By such simple transfer the number of coronary deaths occurring annually in the 50-59 year age group could at once be trebled. The increase in population in the upper age groups would also have to be considered in any analysis made of the increase in the total number of coronary deaths.

Table 6 shows the deaths in 1937 from cerebral hemorrhage or, more specifically, from arteriosclerosis of the cerebral vessels, a total of 98,852.

TABLE 6

Cerebral Hemorrhage

Int'l List 82a

Number of Deaths in 1937

AGES	NUMBER
0–19	437
20–29	541
30–39	1,915
40-49	6,733
50-59	15,044
60–69	25,215
70 and over	48,967
	98,852

This group should be as unmixed or as pure a group of arteriosclerotic deaths as we have. Diagnosis of the condition is so readily established and the etiology is so generally accepted as to make it unlikely that many deaths from other causes are included. The age distribution shown should, therefore, be typical of any arteriosclerotic group and, if so, may assist us in accepting the theory that the chronic nephritis and diabetes mellitus groups, which show the same age distribution, have the same arteriosclerotic basis.

Table 7 shows the deaths from arteriosclerosis of vessels not otherwise shown in these tables, a total of 22,048, again showing the expected arteriosclerotic upper age group distribution.

TABLE 7

Arteriosclerosis, Other

Int'l List 97

Number of Deaths in 1937

AGES	NUMBER
0-19	2
20-29	13
30-39	52
40-49	255
50-59	1,128
60-69	3,462
70 and over	17,136
	22,048

Table 8 shows the deaths in 1937 which have been attributed to chronic nephritis, totalling 98,841.

TABLE 8

Chronic Nephritis

Int'l List 131, 132

Number of Deaths in 1937

AGES	NUMBER
0-19	964
20-29	1,563
30-39	3,392
40-49	7,982
50-59	14,028
60-69	23,017
70 and over	47,895
	98,841

Undoubtedly some of the deaths in this group, particularly at the younger ages, may be due to a nephritis, infectious in origin. The age distribution as a whole, however, is again that of an arteriosclerotic group and would seem to justify the conclusion that most of these deaths are due to sclerosis of the renal vessels, with secondary degeneration of the renal structures.

Table 9 shows the deaths in 1937 attributed to diabetes mellitus.

TABLE 9

Diabetes Mellitus

Int'l List 59

Number of Deaths in 1937

AGES	NUMBER
0-19	696
20-29	559
30-39	763
40-49	2,199
50-59	5,816
60-69	10,194
70 and over	10,360
	30,587

The inclusion of these deaths in the cardiovascular group may give rise to some controversy. The age distribution is typically arteriosclerotic, however, and supports the thought that these deaths are due primarily to vascular causes and that the diabetes is rather a manifestation of secondary degenerative processes.

TABLE 10

Summary

Cardiovascular Deaths, 1937

	NUMBER	
Congenital, Infectious, and Other		75,689
Arteriosclerosis:		
Coronary, definite	69,758	
Coronary, probable	215,905	
Cerebral Hemorrhage	98,852	
Chronic Nephritis	98,841	
Diabetes Mellitus	30,587	
Other	22,048	
Total Arteriosclerotic		535,991
		611,680

Table 10 shows a total of the groups already discussed and indicates that there were approximately 600,000 deaths from cardiovascular conditions in the United States in 1937. Of this total, over 500,000, more than 80 per cent, were probably due to arteriosclerotic conditions.

CONCLUSIONS

The picture presented of the cardiovascular situation today has necessarily been sketchy.

We have tried to show that the picture is an ever-changing one, and to emphasize the importance of etiology in order to simplify and clarify the picture.

The three groups described have been separated in order that we may see clearly the problems which each presents.

The small congenital group will give us the most difficult differential diagnostic problems.

The larger infectious group, chiefly the rheumatic and luetic, will concentrate our attention on prevention.

The largest arteriosclerotic group will tax our ingenuity in therapy.

We cannot escape the conclusion that the population is aging. Some will view this fact with alarm and adopt a defeatist attitude at the thought that our major cardiovascular problems will be those concerned with the care of the aged, for whom little can be done. Perhaps we have a right, rather, to view the scene with a sense of accomplishment, that health conditions have been so improved by medical attainments that more individuals are able each year to live to the maximum age for which they are constitutionally equipped.

Inspired by these accomplishments, our profession will undoubtedly redouble its efforts to make the world even safer for the generations to come.

'Calamine Varnish' treatment plan reduces bedsores to a minimum. A plan of treatment involving the use of a "calamine varnish" reduces to a minimum the occurrence of bedsores and completely prevents their progression to the severe stages, which often seriously interfere with needed surgical treatment, THEODORE A. FOX, M.D., and GEORGE L. APFELBACH, M.D., Chicago, report in *The Journal of the American Medical Association* for October 26, 1940 in an account of their experience with 232 patients.

Bedsores often occur when a patient must remain in one position over a long period, as in fractures or in chronic illnesses. In spite of efforts to prevent bedsores, they frequently overshadow the original surgical condition requiring hospitalization and may prevent correction of fractures, the authors say. Pressure is recognized as the chief cause. Contributing factors include injury due to friction from bedclothes, rucks in sheets or dressings, gritty dusting powder or plaster, or bedpans; moisture, senility malnutrition and vitamin deficiencies. All these factors should be combated.

The two physicians recommend the following technic: "All pressure points are washed with tincture of green soap, alcohol and ether. The calamine varnish is applied with a brush and allowed to dry. Ordinary photographer's rubber cement is then spread over the same area and allowed to dry. These form a thick elastic coat over the points of pressure. The soothing astringent antiseptic coat, with its protecting layer of rubber, forms a pressure-proof, bacteria-proof, moisture-proof prophylaxis for bedsores. This is a routine procedure in the fracture ward (of the Cook County Hospital, Chicago). It may be repeated as often as necessary. It prevents a breakdown of tissue.

"Careful observation of the patient's skin is essential. Should vesicles (blisters) or macerations (softening of the skin) appear they are immediately debrided (cleared of foreign matter and the surrounding tissues cut out) and sprayed with a 10 per cent solution of tannic acid and 1 per cent salicylic acid. When dry a 10 per cent solution of silver nitrate is painted over the area."

Diagnosing subnormal temperatures associated with nervous symptoms. Much needless investigation and treatment of persons with subnormal temperatures associated with certain other evidences of nervous imbalance, especially those in whom the symptoms become evident during wartime, can be avoided if their complaints are considered as a whole rather than attention being focused on isolated signs and complaints, HOBART A. REIMANN, M.D., Philadelphia, declares in *The Journal of the American Medical Association* for November 9, 1940.

Dr. Reimann studied nine patients with such symptoms as subnormal temperatures, slow pulse, palpitation, sweating, weakness, dizziness and numerous complaints for which no organic basis could be found. These symptoms, he believes, are evidence of a general susceptibility to nervous disorder. They are similar to those described in wartime as "soldier's heart" and probably arise from similar causes. In his patients numerous minor surgical operations, expensive laboratory investigations and many drugs were employed which could probably have been avoided had less attention been focused on isolated signs and complaints and the syndrome (set of symptoms) recognized as a whole.

Discussing the relationship of such complaints to war, Dr. Reimann points out: "In certain persons accidents, injuries, psychic (mental) shock, infections or the physical and emotional strains during war or threatened war bring the symptoms to a clinical level.

"Since neurocirculatory asthenia ('soldier's heart') is a serious problem in all great wars, it is bound to be of immediate importance in this country as soon as the draft of men for military service begins. It causes many difficulties in diagnosis and is one of the most frequent causes of invalidism among soldiers. However, it is questionable whether such names as 'soldier's heart' or any other terms directing attention chiefly to the vascular (blood vessel) system are desirable.

"Unless patients of this type are given a correct diagnosis they may be assigned to tasks beyond their limitations during military service. After possible organic causes for their disorder have been ruled out, treatment along psychotherapeutic (mental) and physical therapeutic lines is helpful."

THE DIAGNOSIS AND TREATMENT OF HEART WOUNDS

WITH A SUMMARY OF THIRTY-FOUR CASES*

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The number of patients with heart wounds operated upon in this country has shown a decided increase during the past few years, but it is likely that a considerable percentage of such cases are still not diagnosed and therefore are not properly treated. There are many large general hospitals in which operations for the repair of heart wounds are done rarely if at all. It is significant that when a surgeon connected with such an institution becomes interested in these cases the number operated upon rapidly increases. This has been notably true in Louisville, Memphis, Atlanta, Birmingham, Richmond, and other Southern cities where the colored population is large. Not only is it necessary that some member of the attending staff become interested in these cases, but he must be able to arouse the interest of the resident staff, since the majority of injuries of this type occur at night when members of the attending staff are not readily available. For this reason, the primary diagnosis of heart wound must usually be made by members of the resident staff, and unless they are alert to the symptoms and signs of cardiac tamponade such cases are apt to die undiagnosed and untreated. This is well illustrated by our experience in the Medical College of Virginia Hospitals, where up to 1930 there had been no operation for heart wound. Since 1930, 34 patients with wounds of the heart or intrapericardial portion of the great vessels have been admitted to these hospitals, and 30 of them have been correctly diagnosed (table 1). In most of them the primary diagnosis was made by members of the resident staff.

It seems almost certain that the increase in the number of such operations is due to more accurate diagnosis and not to an increased number of such injuries. That injury to the heart is not uncommon is shown by the fact that nearly 0.1 per cent of the patients admitted to the surgical service of the Medical College of Virginia Hospitals have such wounds.[1] When one considers the size and exposed position of the heart, it is surprising that it is not more frequently injured. In reality, the heart probably is injured much more often than even these figures would indicate, but such injuries frequently are so rapidly fatal that the victims die before they can be transported to hospitals, and therefore the cause of death may not be recorded. This is especially likely to be true in perforating bullet wounds which usually communicate freely with one of the pleural cavities and so cause fatal hemorrhage.

TABLE 1

Summary of 34 Cases of Heart Wound Admitted to the Medical College of Virginia Hospitals within the Past Ten Years

	NUMBER OF CASES	OPERATED UPON	TREATED CONSERVATIVELY	DIED DURING EXAMINATION
Diagnosed Correctly	30	26	3	1
Died Undiagnosed	4			
Total	34			

Patients with stab wounds of the heart are apt to develop tamponade and survive sufficiently long to receive surgical aid, since such wounds do not often completely perforate the heart and the small slit in the anterior pericardium is displaced away from the wound in the chest wall as the pericardial sac fills, thus trapping the blood. As the intrapericardial pressure rises, the venous pressure rises and the arterial pressure falls. This results in circulatory collapse, and, if the victim continues to struggle, death may ensue rapidly. If he survives the early period of circulatory collapse and is given proper preliminary treatment, there is usually a period of temporary circulatory adjustment during which definitive treatment may be carried out.

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* Read at the Annual Scientific Assembly of the Society, October 15, 1940.

Since few patients with heart wounds which communicate with a pleural cavity or with the outside survive to reach a hospital, the diagnosis of heart wound depends usually upon the presence of the signs of tamponade. Any patient with a wound in the cardiac area with circulatory collapse out of proportion to the blood loss should be carefully examined for the signs of tamponade. The most important of these are: a weak or absent radial pulse (if the pulse is palpable it is less rapid than one would expect); distention of the superficial cervical veins; and distant, muffled heart sounds. The external jugular veins should always be carefully inspected and palpated, for they may appear full when the patient is in the Trendelenburg position even though the circulatory collapse is due to actual blood loss, but they will be distended only when the circulatory collapse is due to increased intrapericardial pressure. To be certain of the character of the heart sounds auscultation should be carried out on both sides of the sternum, for in the presence of blood or air in the left pleural cavity the sounds may be indistinct and muffled on the left side but distinct to the right of the sternum. If tamponade is suspected but there is reasonable doubt as to the diagnosis, fluoroscopic examination should be done as the final diagnostic measure. When there is tamponade the cardiac pulsations are obliterated and the pericardial shadow appears immobile. This is important in diagnosis and also gives some indication as to the type of treatment indicated. In 1935 we called attention to the importance of this examination and since that time we have used it to confirm the diagnosis in all patients with the physical signs of cardiac tamponade. In no instance have the findings been misleading. Roentgenograms, on the other hand, are of no value in this diagnosis and may be misleading, because even in the presence of greatly increased intrapericardial pressure the cardiac shadow may be only slightly enlarged.

As previously indicated, patients with heart wounds with free communication to the outside or with one of the pleural cavities usually die from hemorrhage before they can be transported to a hospital, but this is not always true. In the absence of tamponade the diagnosis is more difficult, and it may be impossible to distinguish between hemorrhage from a wound of the heart and hemorrhage from injury to the great vessels in the mediastinum or hilum of the lung. However, in some patients with heart wounds a characteristic churning sound is heard over the cardiac area, and this with the location of the wound of entrance in stab wounds and of the wounds of entrance and exit in bullet wounds helps to localize the injury. In any case, if there is evidence of continued hemorrhage, exploration should be done immediately.

When a patient with a wound in the cardiac area is admitted to one of the Medical College of Virginia Hospitals, he is immediately put at rest in the dorsal recumbent position with the head at a lower level than the body. He is given morphine and atropine, intravenous fluids, and, if there is profound circulatory collapse, epinephrine is administered subcutaneously. A more careful examination is then made and if the findings suggest cardiac tamponade, fluoroscopy is done.

To decide upon the correct definitive treatment we divide heart wound cases into four groups. In Group 1 is placed those patients without appreciable tamponade and with only moderate hemorrhage. Group 2 includes those patients with tamponade who respond to conservative treatment by showing a rise of pressure to nearly normal; they usually have small wounds penetrating one of the cardiac chambers or dividing moderate-sized coronary vessels. In Group 3 are placed those patients with severe tamponade in whom the blood pressure remains low in spite of conservative treatment. Group 4 includes those patients with severe continued bleeding into a pleural cavity or to the outside, with or without tamponade.

Patients with only moderate intrapleural hemorrhage without persistent tamponade are treated conservatively even though cardiac injury seems certain. The following case is illustrative.

J. T., a colored male aged 40 years, entered the St. Philip Hospital on February 3, 1940, a short time after he had been shot in the chest at close range. The bullet had entered the left chest at the level of the fourth costal cartilage, approximately 1½ inches to the left of the sternal border. There was no wound of exit but the bullet was located within the wall near the anterior end of the 12th rib. At the time of admission he showed profound circulatory collapse, was pulseless, cold and sweating. His blood pressure could not be determined, his respirations were slow and labored, the heart sounds were distant and the rate slow. There was marked distention of the external jugular veins. He was placed in the Trendelenburg position, given morphine, atropine, epinephrine, and intravenous fluids, and his condition promptly improved. The pericardium was aspirated and even though only about 20 c.c. of blood was obtained, the systolic blood pressure rose to 110 mm. Hg and remained near that level. He was then examined fluoroscopically and faint cardiac pulsations could be seen. He was transferred to the operating room where it was noted that the cervical veins were less distended and the venous pressure was only 180 mm. H_2O. Since the patient's condition continued to improve it was decided that operation was not immediately indicated. There was evidence of considerable fluid in the right pleural cavity and 500 c.c. of blood was removed by aspiration. This blood was citrated, filtered, and given into his vein. After the autotransfusion his condition was excellent and he was returned to the ward. He made a relatively uneventful recovery.

From the physical and fluoroscopic findings it seemed probable that the bullet had penetrated the right side of the heart and the subsequent development of a pericardial friction rub appeared to confirm this impression. There was marked tamponade at the time of his entrance to the hospital, but the bleeding stopped spontaneously, and the blood drained from the pericardium into the right pleural cavity, thus relieving the circulatory embarrassment.

Patients with tamponade who respond to conservative treatment by a return of the blood pressure to a nearly normal level usually should not be operated upon, for such a rise of pressure probably means that the bleeding has been spontaneously controlled. However, if the signs of cardiac compression are persistent, it is wise to aspirate the pericardial sac to relieve the embarrassment to the circulation. If there is a recurrence of tamponade, operation had best be done. Singleton[2] and Strieder[3] and others have reported cases treated successfully by aspiration alone. The following case is illustrative.

J. P., a colored boy 20 years of age, was admitted to the St. Philip Hospital on August 31, 1940, about 10 minutes after he had been stabbed with an ice pick in the anterior portion of the chest 1 inch to the left of the sternum in the fifth intercostal space. There was no bleeding from the external wound. A preliminary examination revealed the cervical veins moderately distended, the pulse 100 per minute and regular, the heart sounds fairly clear, and the blood pressure 75/50. Fluoroscopy showed sufficient blood in the left pleural cavity to obscure the left border of the heart, but it was thought that there were slight visible pulsations of the right border. A diagnosis of puncture wound of the heart with moderate tamponade was made. The pericardium was aspirated and 200 c.c. of blood removed. His pressure promptly rose to 120/80 and remained at a satisfactory level. He was therefore treated conservatively and made an uneventful recovery.

Patients with tamponade and persistently low systolic blood pressure are operated upon as soon as possible, but sufficient time is allowed for the use of proper aseptic precautions, because operation without proper technic is apt to lead to death from infection. It may be necessary to aspirate the pericardial sac one or more times during the period of preparation, otherwise prolonged severe cardiac compression may lead to death from circulatory failure or irreparable damage to the central nervous system from prolonged anoxemia. The following case is illustrative.

C. F., a 25-year-old negro, was admitted to the St. Philip Hospital at midnight on May 31, 1938. He had been stabbed about 30 minutes before admission, the knife entering immediately to the right of the sternum in the lower portion of the third interspace. His pulse and blood pressure could not be obtained. The external jugular veins were greatly distended and the heart sounds were distant and muffled. A roentgenogram showed no appreciable enlargement of the pericardial shadow, but on fluoroscopy it appeared immobile.

TABLE 2

Summary of Twenty-Six Cases of Heart Wound Operated upon in the Medical College of Virginia Hospitals

CASE NO.	INSTRUMENT	PERIOD FROM INJURY TO OPERATION	LOCATION	RESULT	CAUSE OF DEATH	COMPLICATIONS
1	Knife	1½ hrs.	Left ventricle	Recovery	—	Mild wound infection. Pneumonia
2	Knife	6–7 hrs.	Right ventricle	Recovery	—	Mild wound infection
3	Bullet	50 min.	Left ventricle	Death	Hemorrhage	—
4	Knife	2¼ hrs.	Superior vena cava	Recovery	—	Pneumonia (?)
5⋕	Knife	1¼ hrs.	Right ventricle	Recovery	—	—
6	Knife	45 min.	Right ventricle and pulmonary artery	Death	Bilateral atelectasis	—
7	Knife	1¼ hrs.	Right ventricle	Death	Clot filling right ventricle	—
8	Knife	1 hr. plus	Pulmonary artery	Death	Unknown	—
9*	Knife	1 hr.	Right ventricle	Recovery	—	—
10⋕	Bullet	2 hrs.	Right ventricle	Recovery	—	—
11	Knife	3 hrs.	Left ventricle	Recovery	—	—
12	Knife	2 hrs.	Right ventricle	Recovery	—	—
13	Knife	2 hrs.	Right ventricle	Death	Cardiac hypertrophy and failure	—
14*	Knife	1½ hrs.	Right ventricle	Recovery	—	—
15	Knife	3 hrs.	Right ventricle	Recovery	—	—
16	Knife	2¼ hrs.	Right ventricle	Death	Pulmonary regurgitation (?), fixation of anterior pulmonary valve by suture	—
17⋕	Knife	1¼ hrs.	Right ventricle	Recovery	—	—
18	Knife	2¼ hrs.	Right ventricle	Recovery	—	Wound infection. Empyema
19**	Knife	1¼ hrs.	Right ventricle	Recovery	—	Wound infection. Empyema
20	Knife	1 hr.	Right ventricle	Death	Hemorrhagic erosion of mucous membrane of esophagus. Acute dilatation of stomach	—
21	Knife	1 hr. plus	Left ventricle	Recovery	—	Lobar pneumonia
22	Knife	1¼ hrs.	Right ventricle	Death	Hemorrhage	—
23	Knife	1½ hrs.	Right ventricle	Recovery	—	—
24	Crochet needle	8½ hrs.	Left ventricle	Death	Hemorrhage	—
25	Knife	2½ hrs.	Right ventricle	Recovery	—	—
26*	Knife	2¼ hrs.	Left ventricle	Recovery	—	—

⋕ These cases should have been treated conservatively.

* Operated upon by Dr. H. J. Warthen, Jr.

** Operated upon by Dr. A. R. Stork.

He was given morphine and atropine, a small dose of epinephrine, and intravenous fluids. When he reached the operating room his venous pressure was 320 mm. H_2O and the radial pulse was not palpable, although before he was transferred to the operating room the pulse was palpable and his systolic blood pressure was 70 mm. Hg. One hundred and thirty cubic centimeters of dark blood was removed from the pericardial sac by aspiration. Following this his systolic pressure rose promptly to normal and his venous pressure dropped to 170 mm. H_2O. However, within a few minutes his venous pressure had again risen to 260 mm. H_2O. Operation was rapidly carried out by a transpleural approach through a T-shaped incision. A large quantity of blood was evacuated from the pericardial sac and a wound in the right ventricle was repaired. The patient recovered.

Aspiration was probably a lifesaving measure in this case, but this cannot be proved; however, it is obvious that if the great increase in intrapericardial pressure had not been temporarily relieved by this simple measure, a hasty operation, without proper preparation, would have been necessary.

Two patients with free bleeding into the left pleural cavity were operated upon. Both died from hemorrhage, but, in spite of this, these patients should be given the benefit of the doubt and be operated upon immediately, since occasionally one will be saved in this way. The following case is of interest in this connection.

W. C., a 37-year-old negro, was admitted to the St. Philip Hospital on April 29, 1939. He had been stabbed about 20 or 30 minutes before admission, and the police stated that he had left a trail of blood by which he was traced for two blocks. When he entered the hospital he had a sucking wound of the left chest in the second interspace, the medial end being about 1 inch from the left border of the sternum. He was in profound shock, cold, clammy and pulseless. He was bleeding freely from the wound when seen by the surgical resident, Dr. T. D. Watts, who inserted a gloved finger through the wound into the pericardial sac and thus plugged the opening in this structure. In this way he prevented the loss of blood from the pericardial sac and produced tamponade. The patient was given treatment for shock, including the administration of morphine and atropine, the use of the Trendelenburg position, and the injection of intravenous fluids. He was operated upon 30 minutes after admission and about 1 hour from the time of injury. He had lost a large amount of blood, and even during the administration of intravenous fluids his condition did not show appreciable improvement. At no time was it possible to obtain his radial pulse or blood pressure. When the heart was exposed it was beating weakly and irregularly. The wound in the upper portion of the right ventricle was repaired with interrupted silk sutures. The patient died approximately 1 hour later.

The chief interest in this case centers about the fact that the bleeding was controlled by occluding the opening in the pericardium, which produced tamponade, but which was probably the best method of treatment under the circumstances. Although the patient eventually died, it is entirely possible that he could have been saved if a large supply of suitable blood had been available for transfusion. An immediate attempt at repair of the wound would almost certainly have been fatal and an attempt to plug the wound in the ventricular wall would probably have resulted in tearing of the thin muscle, with the same result.

Summary

From the preceding case reports and discussion it is evident that I do not feel that operation is necessary in the treatment of all patients with heart wounds, but it is necessary in most of them. Of the 34 patients with heart wounds admitted to the Medical College of Virginia Hospitals during the past 10 years, 30 were correctly diagnosed. Twenty-six of the 30 were operated upon, and 3 were treated by aspiration and other conservative means (table 2). One patient, an old man with severe cardiac damage, died while he was being examined. From a careful review of the records of the operative cases, it is evident that 3 of them should have responded satisfactorily to conservative treatment. In other words, 6, or 20 per cent, of the cases correctly diagnosed were suitable for conservative treatment. All 4 of the patients died in whom a correct diagnosis was not made. In

TABLE 3

Location of Wounds and Mortality Rate in Cases Operated Upon

	TOTAL PATIENTS	DEATHS	MORTALITY RATE
			per cent
Right ventricle	17	5	29.5
Left ventricle	6	2	33.3
Great vessels (intrapericardial)	2	1	50
Pulmonary artery and right ventricle	1	1	100
Total	26	9	34.6

each of them autopsy revealed a lesion which should have been amenable to surgical repair (table 3).

Of the 29 patients in this group diagnosed and treated, 20 recovered and 9 died.

When the results in the treated group are compared with the results in the untreated group, there seems little doubt as to the importance of diagnosing and treating patients with heart wounds.

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CASE REPORTS BY WILLIAM STOKES OF DUBLIN*

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It has been customary in our Society for each member in turn to report and analyze some case or cases with which he has been intimately connected. As I have recently read with pleasure and profit "Diseases of the Heart and Aorta"[1] published by William Stokes of Dublin in 1854, I though that you might be interested in having me read to you some of the cases he reports. The cases which I shall read are ones which will stand through the ages as examples of fine contributions to medicine made by keen observers.

William Stokes was born in Dublin in 1804. His forebears five generations before had migrated from England and occupied conspicuous positions in Irish public life. His father, Whitley Stokes, was a physician of distinction and was for many years Regius Professor of Medicine at Dublin. William Stokes studied first at the Meath Hospital and later in Glasgow, and in 1825 he received his degree in Edinburgh. Even as a student he began to contribute to medical literature. He was markedly influenced by Laennec, as were most of the colleagues with whom he was to work in the Irish school. His first work published in 1825 while a student did much to popularize Laennec's fine contribution. This was "A Treatise on the Use of the Stethoscope." Since Laennec's "De L'Auscultation Mediate" had come from the press in 1819, it is obvious that Stokes lost no time in perfecting himself in this new means of accurate diagnosis. On returning to Dublin he was appointed a physician to Meath Hospital where he was closely associated with Graves, Adams, Cheyne, Corrigan, Colles and other fine observers. He was an indefatigable worker and once said, "My father left me but one legacy, the blessed gift of rising early." In 1837 his "Diseases of the Chest" appeared and enhanced greatly his growing reputation. It was quickly translated into German. In 1842 he succeded his father as Regius Professor of Medicine. His finest book, "Diseases of the Heart and Aorta," was published in 1854. This volume was widely acclaimed and immediately translated into German, French and Italian. Stokes' powers of observation were keen and accurate, his ability to describe well nigh perfect, as you will see from his case reports. He added great glory to the Irish school and to British medicine. He died in 1878.

Though it has been usual to speak of Stokes-Adams syndrome, neither Stokes nor Adams was the first to report the condition of "epilepsy or apoplexy with slow pulse." Morgagni[2] in "De Sedibus et Causis Morborum" in 1761 reported an instance of this syndrome in his "fellow citizen, Anastasio Poggi, a grave and worthy priest of a habit moderately fat and a florid complexion." Morgagni states that Gerbezius[3] of Nuremberg had reported a similar case in 1719. Thomas Spens[4] (1793), William Burnett[5] (1824) and Robert Adams[6] (1827) also preceded Stokes in describing this entity. However, I do not gather that he knew of any previous reports except that of Adams.

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* Read before the Clinico-Pathological Society, April 4, 1939.

SIR WILLIAM STOKES

This original photograph of Sir William Stokes was taken in 1857 by Maull & Polyblank in London. Photography was first begun in 1839 and this represents a photograph taken by prominent photographers in London in the earlier period of perfective photography.

The following case is abridged by Stokes[7] from Dr. Adams' Memoirs published in 1827 and is Adams' original communication.

"Case XXVIII—Repeated Apoplectic Attacks during a long series of years; Absence of Paralysis; Remarkable slowness of Pulse; Fatty degeneration of both Ventricles, especially the right.

"An officer in the revenue, aged 68 years, of a full habit of body, had for a long time been incapable of any exertion, as he was subject to oppression of his breathing and continued cough. In May, 1819, in conjunction with his ordinary medical attendant, Mr. Duggan, I saw this gentleman: he was just then recovering from the effects of an apoplectic attack which had suddenly seized him three days before. He was well enough to be about his house, and even to go out. But he was oppressed by stupor, having a constant disposition to sleep, and still a very troublesome cough. What most attracted my attention was the irregularity of his breathing, and remarkable slowness of the pulse, which generally ranged at the rate of 30 in a minute. Mr. Duggan informed me that he had been in almost continual attendance on this gentleman for the last seven years, and that during that period he had seen him, he is quite certain, in not less than twenty apoplectic attacks. Before each of them he was observed, for a day or two, heavy and lethargic, with loss of memory. He would then fall down in a state of complete insensibility, and was on several occasions hurt by the fall. When they attacked him, his pulse would become even slower than usual, his breathing loudly stertorous. He was bled without loss of time, and the most active purgative medicines were exhibited. As a preventive measure, a large issue was inserted in the neck, and a spare regimen was directed for him. He recovered from these attacks without any paralysis. Oedema of the feet and ankles came on early in December; his cough became more urgent and his breathing more oppressed; his faculties, too, became weaker.

"November 4, 1819, he was suddenly seized with an apoplectic attack, which in two hours carried him off, before the arrival of his medical attendant.

"Dissection 56 hours after death.—The dura mater presented a natural appearance. The arachnoid membrane was separated from the pia mater by a fluid of gelatinous appearance. The substance of the brain was watery and of a yellowish white colour. There was some water in the ventricles. These cavities did not appear enlarged, but the foramen of communication between them was dilated. The coats of the carotid and middle arteries of the dura mater were quite white and opaque from bony deposition, but were pervious.

"The right lung was sound; the left was compressed and adhered to the side of the thorax: about a pint of serum and quantities of soft fat, of a very deep yellow colour, filled up the space between the anterior mediastinum and the compressed lung, which was impervious to air, and must have been totally useless.

"The right auricle of the heart was much dilated. The right ventricle externally presented no appearance whatever of muscular fibres; it seemed composed of fat through almost its whole substance, of the same deep yellow colour as that which occupied the place of the left lung. The reticulated lining of the ventricle, which here and there allowed the fat to appear between its fibres, alone presented any appearance of muscular structure.

"The left ventricle was very thin, and its whole surface was covered with a layer of fat. Beneath this the muscular structure was not a line in thickness; it had degenerated from its natural state; was soft, and easily torn, and a section of it exhibited more the appearance of liver than of a heart. The septum of the ventricles presented the same appearance. In both ventricles, even in the lining fibres, yellow spots, where fat had occupied the place of muscular structure, were to be observed. The whole organ was remarkably light; the valves were all sound, except those of the aorta, which were studded with specks of bone, but elsewhere were cartilaginous and elastic, from which they derived a disposition to remain closed; a fluid gently injected from the ventricle would pass them; still, when the heart was reversed and water poured from the ventricle upon them, their valves retained it; its weight was not sufficient to separate the edges of the thickened valves. There was much fluid blood contained in the heart.

"The liver was natural; the vena portae was unusually distended. The spleen was healthy in its structure, although enlarged; the other viscera presented nothing unusual."

The following case is Stokes' first report on this subject. It was published in *The Dublin Quarterly Journal of Medical Science* in 1846.

"Case XXXIII.[8] — Repeated pseudo-apoplectic attacks, not followed by Paralysis; Slow Pulse, with valvular Murmur, propagated into the Aorta.

"Edmund Butler, aged 68, was admitted into the Meath Hospital, February 9, 1846. He stated that his health had been robust until about three years ago, at which time he was suddenly seized with a fainting fit, in which he would have fallen if he had not been supported. This occurred several times during the day, and always left him without any unpleasant effects. Since that time he has never been free from these attacks for any considerable length of time, and has had at least fifty such seizures. They are uncertain as to the period of their invasion, and very irregular as to their intensity, some being much milder and of shorter duration than others. They are induced by any circumstance tending to impede or oppress the heart's action, such as sudden exertion, distended stomach, or constipated bowels. There is little warning given of the approaching attack. He feels, he says, a lump first in the stomach, which passes up through the right side of the neck into the head, where it seems to explode and pass away with a loud noise resembling thunder, by which he is stupefied. This is often accompanied by a fluttering sensation about the heart. He never was convulsed or had frothing at the mouth during the fit, but has occasionally injured his tongue. The duration of the attack is seldom more than four or five minutes, and sometimes less; but during that time he is perfectly insensible. He suffered no unpleasant effects after the fits, nor had anything like paralysis. His last fit occurred about one month before admission. He has never heard it remarked that there was anything peculiar about his heart or pulse. At first he found that ardent spirits were the best restorative or prophylactic, but latterly he has not used them.

"On admission, he was haggard and emaciated, but seemed the wreck of what was once a fine, robust man. He lay generally in a half drowsy state, but when spoken to was perfectly lively and intelligent.

"He makes no complaint of his general health; his appetite is good and he sleeps well; bowels regular, and the urinary functions are in good order. He has, however, some cough, attended with a slight mucous expectoration. His intellectual powers are perfect. He complains of a feeling of chilliness over the body, and is never warm except when close to the fire. This has long been the case; and every day he gets a chill, generally in the afternoon, which is followed by increased heat of the surface, but without sweating.

"On percussion, the chest is universally resonant. The respiratory murmur loud, and combined, more especially posteriorly, with large mucous râles. The impulse of the heart is extremely slow, and of a dull, prolonged, heaving character, giving the idea of feeble as well as of slow action. The first sound is accompanied by a soft bellows murmur, which is prolonged into the commencement of the second sound, and is heard very distinctly along the sternum, and even in the carotid arteries. The second sound is also imperfect, though very slightly so; the imperfection being much more evident after some beats than others. Pulse 28 in the minute, of a prolonged, sluggish character; the arteries pulsate visibly all over the body, but no murmur is audible in them. They appear to be in a state of permanent distention: the temporal arteries ramifying under the scalp, just as they are seen in a well-injected subject. All the other cavities and viscera appear to be in a perfectly healthy state. Urine neither acid or alkaline; of a light colour and clear; specific gravity, 1010; it does not afford a precipitate with nitric acid. He was ordered wine, and a liniment for the shoulder.

"February 17. The pulse has varied from 28 to 30 in the minute. The cardiac murmurs continue unchanged; that with the first sound is plainly audible over the upper part of the thorax, but is most evident along the course of the aorta.

"His aspect and general health are greatly improved since his admission. He gets up every day, and is much stronger. The shoulder is almost quite well. The pulse has continued at about 28 or 30. He says he has had two threatenings of fits since his admission, both occurring in bed, and both warded off by a peculiar manoeuvre: as soon as he perceives symptoms of the approaching attack, he directly turns on his hands and knees, keeping his head low, and by this means, he says, he often averts what otherwise would end in an attack.

"We remarked today, on listening attentively to the heart's action, that there were occasional semi-beats between the regular contractions, very weak, unattended with impulse, and corresponding to a similar state of the pulse, which thus probably amounts to about 36 in the minute, the evident beats being only 28, so that there must be about eight of these semi-beats in the minute;—but these signs are very indistinct.

"18th. He complains today of palpitation, and a feeling of uneasiness about the heart;—the impulse is increased and is found to consist of two distinct pulsations. The murmur with the first sound is somewhat louder than before. On listening attentively, there are heard occasional abortive attempts at a contraction, probably about four in the minute. They do not destroy the regular intervals between the stronger sounds, but are heard, as it were, filling up the interval. We could not recognise a corresponding state of the pulse, which counted 32 in the minute.

"In about three months this patient was again admitted into hospital. The cardiac phenomena remained as before, but a new symptom appeared, namely, a remarkable pulsation in the right jugular vein. This was most evident when the patient lay down. The number of the reflex pulsations was difficult to be established, but they were more than double the number of the manifest ventricular contractions. About every third pulsation was strong and sudden, and could be seen at a distance; the remaining waves were much less distinct, and some very minor ones could be perceived. These may have possibly corresponded with those imperfect contractions already noticed in the heart. The appearance of this patient's neck was very singular, and the pulsation of the veins such as we never before witnessed.

"He has had scarcely any of the cardiac attacks since he was discharged; he referred the premonitory sensations to the right supra-clavicular region, but stated that he often experienced them without loss of consciousness having followed."

In discussing the etiology of these attacks of "Pseudo-Apoplexy," Stokes says:

"The attacks of syncope, those of the pseudo-apoplexy, and the occurrence of sudden death, are traceable to the weakness of the left ventricle, no matter whether that weakness be simply muscular debility without fatty deposition, or whether it occurs in connexion with that change. The slowness of the pulse seems to imply an equally weakened state of both ventricles; while its irregularity and inequality may be attributed to imperfect contractions of the heart, or to a want of consent between the ventricles."

Elsewhere in his book, Stokes says:

"Before proceeding to recapitulate the facts which have been now stated, I am anxious to correct an error into which Dr. Quain has fallen with respect to my views as to the cause of the slowness of the pulse in this disease. In his elaborate Memoir on Fatty Diseases of the Heart, Dr. Quain has the following observations:

" 'The slowness of the pulse is sometimes quite remarkable. In one case (No. vi, Series 1) the pulse was as slow as 24 in a minute when the patient was lying down, and never above 32. There is an interesting communication by Dr. Stokes in the *Dublin Journal* (August, 1846, p. 73), in which he seeks to show the connexion between slow pulse and disease of the aorta or its orifice. I am disposed to think that the soft, flabby, feeble, if not fatty, state of the heart, which was present in all his cases, is more intimately connected with the state of the pulse than the aortic disease, which does not appear to have assumed a constant or uniform character in any of the cases.'

"It is hardly necessary for me to observe, that I never thought of attributing slowness of the pulse to disease of the aorta or its valves. The object of my paper was to show that the frequent combination of disease of the aortic orifice with fatty degeneration of the heart might be made to assist in the diagnosis of the latter affection, inasmuch as under these circumstances there was produced a group of symptoms and signs having a special character, namely, the combination of slow pulse, pseudoapoplectic attacks, and murmur propagated into the aorta, while the second sound remained clear. In fact, my observations were based upon, and intended to illustrate, the views of Dr. Adams on fatty degeneration of the heart."

In addition to Adams-Stokes syndrome, Stokes is most commonly thought of in relation to Cheyne-Stokes respiration. The following is Cheyne's case[9] reported in 1818 and quoted from Stokes' book:

"Case XXVII.—Fatty Degeneration of both Ventricles, with steatomatous and earthy Deposits in the Aorta; Pulse irregular and intermittent; Death by Apoplexy.

"This case is given by Dr. Cheyne:—A gentleman, aged 60, who had lived a sedentary life and indulged freely at the table, became subject to gout in the feet. His regular gout subsided, and he suffered from oedema of the ankles in the evening, for two or three years before his death. His pulse was occasionally intermitting. On the 3rd of February, 1816, he returned home much exhausted by a long walk, and suffering from a fluttering or palpitation of the heart. This was relieved by wine. In the evening he was attacked by a severe fit of coughing, and fell insensible. No paralysis followed this attack, but the patient was pale and confused. The pulse was extremely irregular and unequal. Bleeding and purgatives were freely used, followed by mercurials and diuretics, as the secretion of the kidneys was scanty. The lungs, however, became more loaded, and anasarca rapidly increased. On the 10th of April he was found in bed flushed, speechless and hemiplegic. The paralysis remained up to the period of his death.

"The only peculiarity in the last period of his illness, which lasted only eight or nine days, was in the state of the respiration. For several days his breathing was irregular; it would entirely cease for a quarter of a minute, then it would become perceptible, though very low, then by degrees it became heaving and quick, and then it would gradually cease again. This revolution in the state of his breathing occupied about a minute, during which there were about thirty acts of respiration.

"On dissection the brain presented nothing very remarkable, except an increased vascularity of the pia mater, particularly over the middle and posterior lobes of the cerebrum. The ventricles contained three or four ounces of fluid. The pericardium contained two ounces of fluid, and the heart was three times its natural size. The lower part of the right ventricle was converted into a soft, fatty substance; the upper part was remarkably thin, and it gradually degenerated into this soft, fatty condition. The cavity of the left ventricle was greatly enlarged, and its whole substance, with the exception of the internal reticulated structure and columnae carneae, was converted into fat. The valves were sound, and the aorta studded with steatomatous and earthy concretions.

"This case is full of instruction. We see in a patient of sedentary and luxurious habits the development of the gouty condition, and consequent on this the establishment of a weakened heart, as shown by the irregularity of the pulse and the tendency to oedema. After an over-exertion the fluttering sensation about the heart is suddenly increased, and at the time relieved by the use of wine, and this is followed by an apoplectic seizure, from which recovery takes place without any paralysis. The patient is largely depleted, debarred from his usual stimuli, and dropsy sets in, with increased irregularity of the pulse. Another apoplectic attack, this time followed by hemiplegia, occurs, and the patient sinks, after exhibiting a peculiar character of respiration, doubtless a symptom of this condition of the heart. Dissection shows nothing but congestion of the brain, and a nearly complete degeneration of the heart into fat.

"That a different line of treatment, at least with reference to the detraction of blood and the withdrawal of stimuli, would have been adopted by Dr. Cheyne if this case had occurred some years later, no one can doubt. Owing to the observations of Dr. Adams, the weakened state of the heart is now considered as the cause of the apoplectic seizures, and hence physicians are more cautious in reducing the system."

In discussing fatty degeneration of the heart Stokes says:

"But there is a symptom which appears to belong to a weakened state of the heart, and which, therefore, may be looked for in many cases of the fatty degeneration. I have never seen it except in examples of that disease. The symptom in question was observed by Dr. Cheyne, although he did not connect it with the special lesion of the heart. It consists in the occurrence of a series of inspirations, increasing to a maximum, and then declining in force and length, until a state of apparent apnoea is established. In this condition the patient may remain for such a length of time as to make his attendants believe that he is dead, when a low inspiration, followed by one more decided, marks the commencement of a new ascending and then descending series of inspirations. This symptom, as occurring in its highest degree, I have only seen during a few weeks previous to the death of the patient. I do not know any more remarkable or characteristic phenomena than those presented in this condition, whether we view the long-continued cessation of breathing, yet without any suffering on the part of the patient, or the maximum point of the series of inspirations, when the head is thrown back, the shoulders raised, and every muscle of inspiration thrown into the most violent action; yet all this without râle or any sign of mechanical obstruction. The vesicular murmur becomes gradually louder, and at the height of the paroxysm is intensely puerile.

"The decline in the length and force of the respirations is as regular and remarkable as their progressive increase. The inspirations become each one less deep than the preceding, until they are all but imperceptible, and then the state of apparent apnoea occurs. This is at last broken by the faintest possible inspiration; the next effort is a little stronger, until, so to speak, the paroxysm of breathing is at its height, again to subside by a descending scale."

It is less generally known that in "Diseases of the Heart and Aorta" Stokes[10] gives the first description of paroxysmal tachycardia and its relief by the use of emetics. I quote his reports:

"Indeed the study of cardiac pathology leads irresistibly to the conclusion, that in valvular disease the source of irregular and excited action is to be sought for less in the condition of the valves than in that of the heart itself. As there is no form of mere valvular disease which has not been found to occur with a perfectly regular action of the heart, we must look for the cause of irregularity and excitement in this affection to some other source; and it is to be borne in mind that the most remarkable cases of irregular action of the heart are those without any lesion of the valves. Gouty palpitation, hysterical or nervous affections, cardiac attacks depending on sympathy with the stomach or liver, and, lastly, the dilated and weakened condition of the heart, attended with pulmonary and hepatic congestion, as in the case of Mr. Colles, present the most striking examples, not only of irregularity but of excited action; and these cases may occur independent of any valvular disease, or, if such exist, it is inconstant in its seat, nature, and amount, and incompetent to explain the condition in question. We too often find physicians giving an erroneous opinion from ignorance of these facts, for in their minds the ideas of irregular action and of valvular disease are so closely combined, that they make the diagnosis of incurable disorder in cases where an emetic, an anti-nervous draught, the occurrence of gout in the extremities, or a few doses of a mercurial, will restore the natural action of the heart.

"A remarkable case, illustrative of what has been now said, occurred in Dublin some years ago. The patient, a lady of great intelligence, was for some years the subject of long-continued attacks of violent and extraordinary palpitations, during which the action of the heart became greatly excited, extremely irregular, and attended by a loud bellows, murmur, approaching to the *bruit de rape*. During these attacks she was visited by several experienced physicians, who all concurred in the opinion that some extreme and singular disease of the valves existed. After having been the subject of this disease for several years, she consulted me. The paroxysm was then in its decline, after having lasted for some weeks, but the action of the heart was irregular, with a loud and somewhat metallic murmur apparently attending the first sound. She mentioned her anxiety that I should not make up my mind as to the nature of her case until I saw her a second time, which she arranged should be in the course of about ten days, observing that her physicians had not had fair play, inasmuch as they had only examined her heart during the continuance of its excitement. The patient was perfectly persuaded that she laboured under a fatal organic disease. I saw her again in about ten days; the heart's action was perfectly tranquil, the pulse natural, and every trace of murmur had disappeared. Several years afterwards I saw this lady; she was then in perfect health, and mentioned, with a good deal of self-complacence, that she had not only puzzled all her physicians, but had discovered her own cure, and this was in the use of an emetic at the commencement of each attack, a practice to which she had been led by the occurrence of accidental vomiting from the effect of some medicine which had been administered. She then determined to take an emetic of mustard or ipecacuanha on the supervention of each attack. The paroxysms became less and less severe, and finally disappeared. When I last saw her she was able to take active exercise, and the action and sounds of the heart were natural.

"A case, probably of a similar nature, was that of a young man who was brought into hospital suffering from extraordinary excitement of the heart, the action of which was so violent that the most severe form of carditis was believed to exist. The patient was treated with extreme but erroneous activity; he was repeatedly and largely bled, mercury was freely exhibited, and all other means of subduing local inflammation resorted to; yet not the slightest impression seemed to be made on the disease; and as his strength was much exhausted, while the action of the heart continued with terrific violence, the gentleman under whose care he was placed suspended treatment, the death of the patient being daily expected. A draught, containing ether, laudanum, and other ingredients, having been taken, was followed by full vomiting, after which the action of the heart became regular and tranquil; the murmur disappeared, and convalescence was rapid and complete."

There is much of value to be gleaned from this early volume. When one reads it, he is overcome with admiration and humility. With all our modern methods, there is, unfortunately, a tendency for the practitioner to rely so much on the mechanical that his powers of observation are not developed so keenly as those of these earlier practitioners.

(*Continued on page 412*)

MEDICAL ANNALS

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EDITORIALS

THE PRESIDENT SPEAKS HIS MIND

President Roosevelt states that the Government does not intend to socialize medicine. In a dedicatory address delivered at the National Institute of Health on October 31, 1940 he said:

"Neither the American people nor their Government intend to socialize medical practice any more than they plan to socialize industry. In American life the family doctor, the general practitioner, performs a service which we rely upon and trust.

"No one has a greater appreciation than I of the skill and self-sacrifice of the medical profession. And there can be no substitute for the personal relationship between doctor and patient which is a characteristic and a source of strength of medical practice in our land."

This statement will be welcomed by the medical profession because it has long been under the impression that the President was sympathetic to those within his Administration who have ardently advocated compulsory health insurance. They are still in office and the President's views will undoubtedly be a bitter pill to them.

For years a small group of Government officials have by various means sought to gain public support for radical changes in medical practice. They have written books, articles and statements on the subject. Whenever the opportunity offered, they have endeavored to convert leaders of labor, business and the professions to their beliefs. In so doing they have not hesitated to discredit organized medicine. Their efforts culminated in the National Health Conference which was held in Washington in July 1938. Participants in the Conference, who were supposedly representative of a cross-section of our population, were predominantly in favor of the program proposed by the Technical Committee on Medical Care, in which it was recommended that Governmental medical service be extended to self-supporting persons, funds to be provided by taxation and insurance contributions. When the National Health Bill was introduced by Senator Robert F. Wagner of New York, it appeared that the opposition of medical leaders to systems of medical care which would regiment the profession had had its effect, for there was no reference in this legislation to the Technical Committee's proposal for tax-supported or insurance medicine for those who are gainfully employed. However, the bill contained nothing to prevent establishment of such systems. There were other objectionable features to which the legislators' attention was called. This bill is still before Congress.

Now that the President has spoken his mind, the medical profession will look to him for sympathetic understanding of their views. Undoubtedly efforts will be made by others to "socialize medicine" but the President's stand should discourage proponents of changes in medical practice which are not in the interest of the public.

NOW THAT THE ASSEMBLY IS OVER

I have asked myself several times why we hold an ANNUAL SCIENTIFIC ASSEMBLY, and I imagine others have done the same. There are reasons which appeal to me personally as being sound; at least, they seem so, now that we have so recently emerged from the work of managing the ASSEMBLY for 1940.

There are some reasons for its existence which are obvious to all. The ASSEMBLY has become an educational enterprise unsurpassed by any similar endeavor in the Nation's Capital. It is clear that men of such scientific standing as appeared on the program must bring their confreres the results of clinical investigation of a stimulating nature, and teach them much. Teachers are men of honor, recognized and accepted by all as the experts and leaders in their particular field of endeavor, bringing truths of experience to others. In short, the educational value of the ASSEMBLY is not debatable. Likewise, I feel reasonably sure the scientific exhibits have an equally undisputed educational value.

The annual banquet, the Society luncheon, and the luncheons of the medical school alumni groups have value in that they afford periods of relaxation, time to rest, to meet and chat with new and old friends, and an opportunity to join our fellow physicians in play and fun.

The technical exhibits have a special purpose, affording an opportunity to closely inspect the end-products of scientific research made available to us for clinical application by manufacturers of high ethical standing. These companies go to no end of trouble and expense to fulfill their share and purpose in the ASSEMBLY.

The features added this year—the Doctors' Hobby Show and the "Medical Varieties of 1940"—bring new values to the ASSEMBLY, a more friendly relationship and a feeling tone of closer intimacy with our medical friends. We cannot hope to know or visit with all of our fellow physicians in the peaceful quiet hours of an "at home," but we can see the results of their by-loves done in moments when their serious endeavors of practice are temporarily laid aside.

However, I repeat that these are reasons obvious to all and probably unquestioned, but does all this balance the weeks and months of time devoted, unstinted labor freely given, limitless amounts of clerical, secretarial and administrative effort expended on this annual project?

Numerically, some one hundred and forty members of the Society, or approximately 15 per cent of the Society's total membership, served on the various subcommittees of the Committee on Arrangements for the ANNUAL SCIENTIFIC ASSEMBLY. These men need no obvious reasons for holding the ASSEMBLY. The reasons are known to them by the end-results of their labors; each will share alike in the pride of their endeavors—a work well done. The love of their labor, the companionship of their medical friends in Society endeavors, the joy of finished and well done work, are reasons known to those serving in this capacity, but not always so obvious to the rest of the membership, for holding an annual meeting or sponsoring any other Society project.

The reward has been great and each committee member must feel a deep sense of satisfaction. The Society has paid its debt for this work by its splendid support in registration and attendance at the Assembly, and the Society should continue to pay for all future projects in like manner. Facing arduous days through distasteful legal circumstances, the Medical Society sponsored, organized, produced, and supported through attendance a great Assembly, bringing credit to individual committee workers and honor to the Society itself, and welding its membership together for the good of the profession.

Finally, comments on the Assembly would not be complete without proper mention of the commendable work of the Secretary of our Society. His excellent administrative ability, his keen, experienced judgment, and his untiring coöperation assured a successful meeting.

May our great Society go forward unified, each individual member serving fully in Society work assigned by those in office, and the entire membership supporting this work through attendance, constructive analysis and constructive criticism.

John A. Reed, M.D.

PERTINENT PARAGRAPHS

October Meetings

Although most of the meetings held in the past month by the Boards and Committees were devoted to matters related to the medical preparedness program and the Annual Scientific Assembly, other activities of the Society have received attention. The following meetings were held:

October 1	Committee on Public Health and Chairmen of Subcommittees
October 2	Committee on Medical Resources
October 4	Subcommittee on Women Physicians, Annual Scientific Assembly
October 7	Subcommittee on Associates, A. S. A.
October 8	Committee on Arrangements, A. S. A. Board of Censors
October 9	Committee on Medical Resources Executive Board
October 10	Committee on Medical Resources
October 11	Committee on Public Policy
October 28	Executive Board Committee on Medical Resources
October 31	Medical Bureau Committee

●

Bureau Will Render a Public Service

On December 1 the Society's 24-hour telephone exchange, Medical Bureau, will begin operation. One hundred and fifteen physicians have subscribed to the Bureau, a majority of them to the Alternate Listing Service.

The Bureau will be located on the third floor of the Society's building. A special switchboard, now under construction, will be installed. It will be equipped with the latest devices used by telephone secretarial services. Operators who are to be employed will receive instruction prior to the opening of the Bureau to insure smooth operation.

The telephone directory to be issued in December was closed to listings on October 23. However, physicians who wish to subscribe to the Alternate Listing Service need not wait until the next directory. Placards for the doctor's office and stickers to be used on stationery stating that he is a subscriber will be provided gratis. The physician using the Bureau under these conditions should also instruct his patients to call the Bureau when he is not at his office or home.

It is confidently expected that Medical Bureau will fill a real need in Washington for it will not only serve physicians and their patients, but it will provide inquirers with reliable information about medical practitioners and institutions.

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An Answer to Critics

In the November issue of the *Nation's Business* there appears an article by Fred DeArmond entitled, "Cutting the Doctor's

Bill to Fit." Mr. DeArmond is the author of "The Case for Private Medicine" which appeared in the May issue of the same publication. In his current contribution he refutes the criticism that the medical profession has done nothing about the "costs of medical care." He says:

"During the hard times from 1932 to '38 more than 200 county medical societies took direct, voluntary action by pooling their resources and entering into agreements with relief authorities to provide medical care for the growing army of the indigent. . . . To serve better both the low income and indigent economic zones the profession began to organize local medical service bureaus or clearing houses on a large scale. Through these agencies, the indigent are 'filtered' into the proper hospital, clinic, institution or doctor's office. The medical service bureau also became the agency for administering what has come to be known as the postpayment solution of this 'physio-economic' problem of the low income people. . . ."

There follows at this point a description of the Health Security Administration of Washington and the manner in which it functions.

Mr. DeArmond continues:

"Stepping up now to the lower middle class—those whose earnings range roughly from $1,000 to $2,500 a year—we find an economic group who generally ask no favors but for whom an emergency illness may be a financial shock. For their benefit, the doctors are experimenting with prepayment plans. . . .

"Out of the multiplicity of experience, it is hoped, certain patterns of sound procedure will emerge. . . .

"Notwithstanding intensive concentration by the profession on organizing for prepayment, the results as yet are inconclusive. . . ."

Plans which have been sponsored in Michigan, California, Wisconsin and the District of Columbia are described. Mr. DeArmond says about them:

"To a lay observer one fact stands out above every other. The agitators for social reform in the method of caring for the sick have overstated both the acuteness of the problem and the simplicity of its solution."

This article should be read by every physician for it contains information that too many practitioners are not familiar with.

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More on the Premarital Examination Law

In the last issue of the MEDICAL ANNALS there was published a draft of the proposed premarital examination law for the District of Columbia. Since that time consideration has been given this legislation by the Society's Committee on Public Policy. Although the Committee found merit in the bill, it was not in accord with the requirement that parties to a marriage be examined for syphilis alone. It believed that it was equally important that they be examined for other communicable diseases which might jeopardize their health and happiness. The Committee has therefore prepared a revision of the bill which it has submitted to the Executive Board, which will refer it to the Society with its recommendations at an early meeting.

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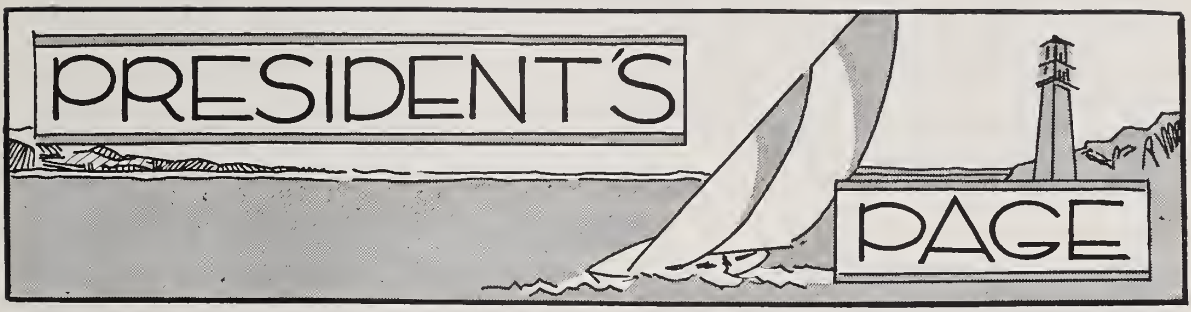
Military Medicine

Medical publications throughout the country are becoming "military-minded." State journals which have devoted a recent issue to military medicine have been the *Journal of the Indiana State Medical Association*, the *Connecticut State Medical Journal*, the *New York State Journal of Medicine* and the *Journal of the South Carolina Medical Association*. Papers and articles published have been excellent and of particular value at this time.

Ample material along this line is available in Washington. Editors of the MEDICAL ANNALS therefore have a military number under consideration.

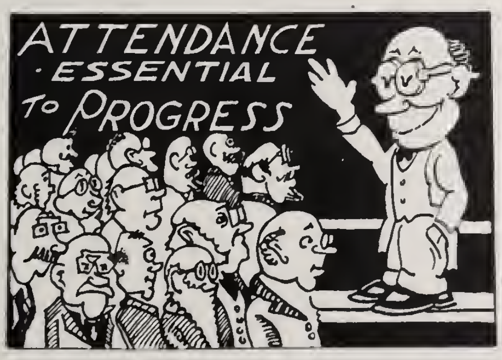


WHY YOUR ATTENDANCE IS IMPORTANT

The recent Annual Scientific Assembly hit an alltime high for attendance and general excellence. With this auspicious beginning it is the plan and hope of your officers to carry through future scientific meetings on such a high level that a good attendance will be assured.

If the general membership of the Society fully realized the time and effort devoted to arranging the best possible programs, I am sure that the auditorium would be filled at every meeting. The Program Committee is really doing a "bang-up job." Members can therefore anticipate with confidence the appearance of established and widely known authorities in the various fields in medicine during the coming winter.

The young physician looking forward to the future cannot afford to miss Society meetings if he has an ambition toward professional attainment. Not only is it necessary for him to keep up with all latest developments in medicine, but participation in meetings offers him a golden opportunity to become known to the men with whom he will be associated for many years to come. The older practitioner, recognizing the necessity of keeping abreast of the times, should set an example by his active interest. A younger man is bound by tradition and good common sense to follow in the footsteps of his elders. Well attended meetings, of course, work two ways; they help the individual and repay the officers for their efforts.



This year for the first time in the Society's history there will be but three regular business sessions. At each of these meetings it is planned to have a speaker who will address the Society on some timely subject. A buffet supper will also be served.

Chapter I, Article II of our Constitution and By-laws reads: "The object of this Society shall be the promotion of the science and art of medicine." To what degree this objective is attained depends on each one of us. The first requisite is that we attend scientific meetings.

Daniel LeRay Borden

MEDICAL PREPAREDNESS NEWS

Editor's Note: Because it is important that physicians in the District of Columbia be kept informed in regard to preparedness plans, this new department of the Medical Annals has been inaugurated. It will not be possible to publish lengthy documents. Members desiring detailed information should call Theodore Wiprud, Secretary of the Committee on Medical Resources, District 3111.

In the last issue of the Medical Annals a list of examining physicians appointed to serve with local draft boards in the District of Columbia was published. Additional appointments have since been made. At the request of General Albert L. Cox, Selective Service Director for the District, the Committee on Medical Resources held another drawing for the purpose of obtaining alternate examining physicians for each district. Those drawn were as follows:

District No. 1	Robert H. Harmon
District No. 2	Bernard W. Leonard
District No. 3	Edward W. Nicklas
District No. 4	John B. Marbury
District No. 5	John C. Reisinger
District No. 6	Allan E. L. Lee
District No. 7	Harry Zehner
District No. 8	Edgar E. Quayle
District No. 9	F. H. Mistretta
District No. 10	Worth B. Daniels
District No. 11	D. Maxie Harper
District No. 12	Frank A. Turner
District No. 13	Clayton B. Ethridge
District No. 14	Fred Repetti
District No. 15	Ulysses B. Martin
District No. 16	John H. Elvin
District No. 17	Frank W. Braden
District No. 18	Charles J. Bowne
District No. 19	Norman W. Harris
District No. 20	Richard F. Shaw
District No. 21	Robert R. Hottel
District No. 22	Earl W. Graeff
District No. 23	George I. Eppard
District No. 24	Aaron S. Schwartzman
District No. 25	J. F. Dyer

The above names were submitted by General Cox to the Commissioners who in turn presented them to the President of the United States who has announced their appointment. Physicians in the eleventh, twelfth, fifteenth, nineteenth and twenty-fifth districts were chosen by the Medico-Chirurgical Society, Inc. of Washington.

The Society's Committee on Medical Resources also provided General Cox with the names drawn for the Medical Advisory Committee. Three full committees were submitted. However, only one was appointed by the District Commissioners.

Appointments to the Committee were as follows:

Internist	Lewis C. Ecker
Ophthalmologist	William Thornwall Davis
Otolaryngologist	William C. Sparks
Orthopedist	John A. Talbot
Surgeon	Charles S. White
Psychiatrist	E. Hiram Reede
Clinical pathologist	Janvier W. Lindsay
Radiologist	Edgar M. McPeak
Dentist	A. D. Solomon

The dentist member of the Board was recommended by the District of Columbia Dental Society.

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Few speakers have been listened to more attentively than Major General James C. Magee, Surgeon General of the United States Army, who spoke at the Medical Society luncheon on the first day of the 1940 Annual Scientific Assembly. Physicians present were naturally anxious to know more about their role in the medical preparedness program. General Magee, in referring to the survey which the American Medical Association is making of the Medical profession, said that the Association is "doing a splendid piece of work."

In order to meet the estimated needs of an Army of 1,400,000, he said it will be necessary to increase the 13,000 hospital beds provided for a peacetime Army to more than 80,000; the 1,210 medical officers to 10,500; and the 610 nurses to 5,000. The first call, General Magee stated, will be on the 15,000 physicians in the Medical Reserve Corps. Many of these, he explained, will be unable to serve and he intimated that the list will be exhausted in the first year. He said frankly that he was relying upon organized medicine to aid in providing the necessary personnel.

Medically, he stated, the Nation is better prepared for an emergency than ever before due in large part to the coöperation of the American Medical Association and the National Research Council. Better organization and careful planning, General Magee said, would eliminate mistakes which were made in the last war, such as having good surgeons serve as registrars and bacteriologists as ambulance drivers.

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Inquiries regarding the Selective Service Act have been received by the Committee on Medical Resources from a number of physicians. Some wish to know if the fact that they are of draft age bars them from serving as examining physicians. There is nothing in the regulations which would prohibit them from doing so. However, the Committee has been informed that it is desirable that examining physicians should be above draft age.

Requests have also been received for information regarding the methods and procedures of examining those who are drawn for service. Complete rules and regulations will be furnished examining physicians. Instructions as to where and when the men drawn will be examined will also be provided.

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Requests for deferred service made by Medical Reserve Officers in the District of Columbia have been referred to the Committee on Medical Resources by Major Harry Slaughter, Assistant Unit Instructor, Washington Military District, Third Military Area, Organized Reserves, with the request that the Committee provide information regarding the status of these physicians in the community. Considerable detail work is necessary in connection with this matter and clerical help has been provided the Society's office by Major Slaughter's department.

MEDICAL PREPAREDNESS FOR NATIONAL DEFENSE

Rear Admiral Ross T. McIntire, *Medical Corps, U. S. N., The Surgeon General of the Navy*

In considering medical preparedness for National Defense, we must look upon military and civil needs as one. During the last World War, mobilization in this country proceeded along a very slow and seemingly normal course. Our purpose at that time was to develop an Army for overseas service and a Navy that could transport our Army to foreign shores. This undertaking called for millions of men. The medical side of mobilization was taken care of by the regular services of the Army and the Navy, with the aid of a tremendous number of civilian doctors who were inducted into the Reserve Corps. Many communities were, as a result, left without physicians, and the need for proper medical care was felt in many sections of the country. It was not difficult, however, to adjust this situation and in the main it was done.

Our industry was expanded tremendously to meet the growing needs of the military services. Industrial medicine was developed in a rather haphazard way. Our hospitals felt no particular pressure during these early stages and it was only when the Army, with its great expansion, drew upon the civilian nurses that our civil hospitals found their routine disrupted.

It was not until the War was over that the hospitals began to be crowded with all types of cases. The Veterans Administration was organized, and where civilian institutions could not take care of the cases new hospitals were built or procured by the Government. It was only a short time until it was found necessary to provide many hospitals for the care of tuberculous and neuropsychiatric cases.

A comprehensive survey is now being made by the Federal Board of Hospitalization to determine the proper geographical distribution of hospital beds in case of a national mobilization.

Looking forward to the problem, then, of broad planning for our National Defense, the President has appointed a committee whose duties will cover every aspect of medical and health needs of the population. This committee will also act in an advisory capacity to the Council of National Defense and to the committee of representative civilians that has been set up under it. It has the power to form subcommittees for study of any problem that the National Defense Council may desire advice on, or any matter that the committee itself may consider important in national health. I think you will realize the tremendous value of this shortcut in planning for the betterment and safety of our entire population.

The educational problem, as far as medicine is concerned, is to be given immediate consideration. In our plan for a total National Defense, education of our young people in the various professions, arts and trades is important. For example, there is a great need for skilled workers in our aircraft factories. This holds good in our laboratories and in our special instrument shops. It is very easy to build hospitals, but it is not easy to supply the personnel to run them efficiently.

There are fewer than 1,000 doctors who have had experience in industrial medicine. Of these, less than 100 have had specialized training and are competent to direct a large industrial health organization or to act as instructors to young men. The Navy Department is constantly called upon for consultation and advice on industrial health problems, which it gladly furnishes. The Navy is one of the largest employers in the industrial field.

In the field of public health and preventive medicine, outside of the Government service, there are fewer than 1,200 men who have had specialized training which would qualify them to head up a health organization in a state or a county. I could go on for a long time in other specialized fields, but the answer to this problem is a comprehensive educational program that will provide this country with the necessary doctors who can carry out the mission of keeping up the health standards in civil life.

The people of our country should know that we are planning to avoid the mistakes that are being made, and have been made, in Europe in regard to the care of the wounded and the proper preventive measures that must be taken to protect non-combatants. The Navy has experienced observers in England, as have the Army and the Public Health Service.

The point that I wish to make very clear is that the military services are taking the broadest possible view of national mobilization. We are proceeding carefully so as not to rob the civilians of proper and adequate medical and hospital care.

We are seeking to avoid the mistakes that were made during the last war when we allowed so many mentally unstable individuals to join the Services. The Army and the Navy plan to have highly trained psychiatrists and psychologists at the training stations and collecting points for recruits in order to prevent the entrance of young men who might otherwise be placed in some useful employment in civil life. This will conserve many men for their country who might otherwise break down mentally, as was seen so frequently during the World War, and thereby become charges of the Government for the rest of their lives.

In the same manner it is planned to X-ray the chests of all recruits so that the tuberculous will not be permitted to go into the rigorous life that one finds in the Services. These men will be given an opportunity to secure proper treatment so that this disease may be arrested and they too will find a useful place in civil life.

The National Research Council is coöperating with the Services in many forms of medical research. The medical profession is giving the finest possible demonstration of coöperation to the Army and the Navy, and splendid progress is being made along all lines.

Steps are being taken that will insure the carrying out of the recommendations that will be made to the National Defense Council in all of the problems and measures which I have mentioned. I am very glad to tell you that this is well under way and with the aid and assistance of such organizations as the American Medical Association, the American Red Cross, the American College of Surgeons, the American College of Physicians, the American Dental Association, the American Hospital Association, and all other associations that have to do with the health in this country, the American citizen can look forward with assurance that the health of the nation will be properly cared for.

1940 ASSEMBLY ACCLAIMED; RECORD REGISTRATION

The 1940 ANNUAL SCIENTIFIC ASSEMBLY was in many respects the finest meeting sponsored by any medical organization in the District of Columbia. Communications which have been received since the ASSEMBLY indicate the complete satisfaction of those in attendance, not only with the splendid scientific program but with other features as well.

Attendance reached a high mark, 1,343 registering for the meeting. Well over half the Society's membership were on hand during the three days' session. Unfortunately not all those who attended registered, although every effort was made to have them do so. Out-of-town physicians were more numerous than they had been at any previous ASSEMBLY.

There were 400 present at the Medical Society luncheon on Tuesday, October 15. Major General James C. Magee, Surgeon General of the United States Army, gave a timely and informative address on medical preparedness. He outlined the program in which the medical profession will participate, emphasizing the fact that its success was dependent upon the cooperation of organized medicine.

All sessions of the POSTGRADUATE COURSE IN CARDIOVASCULAR-RENAL DISEASES were excellently attended. Usually physicians do not turn out for the morning lectures; however, the Grand Ballroom at the Mayflower was well filled from the time the first paper was presented until closing time.

The luncheon given by the Georgetown Medical Alumni Club on Wednesday, October 16 was addressed by Honorable Edward M. Curran, United States Attorney for the District of Columbia. The speaker at the George Washington University Medical Society luncheon on Thursday, October 17 was Professor D. E. Rebok, missionary educator with the Seventh-Day Adventist Mission in China.

The Scientific and Public Health Exhibits were by far the best which have been shown at an ASSEMBLY. They completely filled the large East and Pan-American Rooms and Seventeenth Street Parlor and deserved the high commendation which they received.

Perhaps the most unique feature of the ASSEMBLY was the Doctors' Hobby Show. Hundreds of physicians, their wives and friends, visited the Show and there was high praise for many of the exhibitors. The Woman's Auxiliary not only gave valuable aid in preparing the exhibits but assumed the responsibility for all costs involved.

Particularly pleasing to the Committee on Arrangements for the ASSEMBLY was the attendance at the public meeting. There was a near capacity crowd on hand to hear the speakers, who were Dr. Harry Stack Sullivan and United States Senator William H. King of Utah. Dr. Sullivan's subject was "War—Nerves and the Public." Senator King spoke on "Medicine, Preparedness, Americanism."

A luncheon was given by the Woman's Auxiliary on Wednesday, October 16 at the Mayflower. On the evening of the same day the Women's Medical Society held its annual dinner. Both were well attended.

There was no event which evoked greater enthusiasm than the "Medical Varieties of 1940" which was presented at the annual banquet. Four hundred persons were on hand to enthusiastically applaud a varied and excellent performance by talented members of the Medical Society. It was a fitting climax to a most successful meeting.

MEETINGS

Wednesday, November 27

"The Diagnosis and Treatment of Lesions of the Cranial Nerves." Walter E. Dandy, M.D., F.A.C.S., Clinical Professor of Neurological Surgery, Johns Hopkins University School of Medicine

"The Patient Has a Stroke." Walter Freeman, M.D., F.A.C.P., Professor of Neurology, George Washington University School of Medicine

Wednesday, December 11

"Physical Therapy in the Treatment of Osteoarthritis and Rheumatoid Arthritis." Isadore Levin, M.D.

"Osteomyelitis." Guy W. Leadbetter, M.D., Associate in Surgery, George Washington University School of Medicine

"The Prevention and Treatment of Infections in Wounds." W. Warren Sager, M.D., F.A.C.S., Assistant Professor of Surgery, George Washington University School of Medicine

MEMBERSHIP

The following applicants were duly elected to membership at the business session, October 9, 1940:

Active Members

Leo William Dufault, 1205 Farragut Street, N.W.
John Henry Hazard, 816 Maryland Avenue, N.E.
Louis Samuel London, 1028 Connecticut Avenue, N.W.
John Walter Martin, 900 17th Street, N.W.
Hector Caldwell McKnew, 1801 Eye Street, N.W.
Ernest Michaelson, Sibley Hospital
Joseph Bart Sheffery, 801 Fifth Street, N.E.

Associate Members

William David Chase, McLean, Va.
Lawrence Bernard McCaleb, 15 Girard Street, N.E.
Dallas Haven McCarter, 1527 28th Street, S.E.
John Louis Parks, 1843 Burke Street, S.E.
Margaret Isabel Reith, 504 Tulip Avenue, Takoma Park, Md.
Ernest Clay Shull, Herndon, Va.
John McCullen Warren, Laurel, Md.

The following applicants for membership will be voted on at the business session, December 11, 1940:

For Active Membership

John James Andrina, Georgetown University—1937
Virginia Patterson Beelar, University of Oregon—1936
James Wilson Braden, Rush Medical College—1935
William Henry Breeden, Medical College of the State of South Carolina—1938
Alfred Emanuel Brigulio, George Washington University—1936
Louis Marshall Cuvillier, Jr., George Washington University—1938
Jack Leon Derzavis, Georgetown Univerity—1937
Mazarin Campbell Dollman, George Washington University—1907
Armand Byron Gordon, George Washington University—1938
Clarence Joseph Kelley, Georgetown University—1936
Henry Thomas Kulesher, Georgetown University—1937
Albert Edward Meisenbach, Jr., Washington University, St. Louis—1937
Joseph A. Mendelson, Temple University—1915
Matthew Mendelsohn, George Washington University—1932
John Edward Morris, Emory University—1936
LeRoy Robins, George Washington University—1938
Louis Ross, George Washington University—1937
Richard Harding Spire, George Washington University—1937
Benjamin Stein, Tufts College—1936
John C. Sullivan, Georgetown University—1937
Sam Lester Tabb, George Washington University—1930
Joseph James Wallace, Georgetown University—1937
Bernard J. Walsh, Georgetown University—1934
Simon Weiner, Jefferson Medical College—1939
Inez Edith Wilber, University of Michigan—1932
Alfred Wilson, University of Toronto—1928
Alvin Eugene William Wode, University of Maryland—1935

For Associate Membership

Raymond Franklin Chinn, George Washington University—1939
Charles Albert Finnigan, Georgetown University—1937
Stuart Wellington Lippincott, McGill University—1935
Leo Victor Schneider, Donskey University, Russia—1920
Morris Silverman, George Washington University—1933
Harold Milton Walton, College of Medical Evangelists—1928
Ralph Waldo Weilerstein, University of California—1935

The following applicants for membership will be voted on at the business session, January 8, 1941:

For Active Membership

Miriam Frances Dunn, Johns Hopkins University—1928
Clarence Richard Hartman, George Washington University—1936
C. Francis Scalessa, Georgetown University—1937
Samuel Hazen Shea, George Washington University—1936
Sylvan A. Steiner, George Washington University—1937

For Associate Membership

George Johns Hageage, Georgetown University—1932
Leland Floyd Hobbs, University of Virginia—1932
Herbert DeGrange Wolff, Jr., University of Virginia—1929

Recent changes in membership status:

Reinstated to Active Membership

Robert Andrew Keilty

Resigned

Associate Member

Henry Clay Michie

NEWS AND PERSONALS

The American Academy of Dermatology and Syphilology will hold its third annual meeting at the Palmer House, Chicago, December 8–11. Sessions will be in the form of symposia, special lectures in courses of one to four hours each; numerous luncheon round table discussions; and clinical presentations at the University of Illinois Medical School in Chicago.

The Medical and Surgical Supply Committee of America, recently organized for the purpose of furnishing medical aid to recognized relief organizations in Great Britain, is composed of about 250 physicians and surgeons who have volunteered to assist in obtaining contributions of needed medical and surgical supplies. So far approximately $40,000 worth of equipment and supplies have been sent to Great Britain. The organization has offices at 420 Lexington Avenue, New York City, and is establishing branch committees in 81 cities. **Dr. William J. Mallory** and **Dr. James A. Cahill, Jr.,** have been appointed heads of the local committee.

The Committee on Public Education of the **American Psychiatric Association** has announced the organization of twelve regional districts, each headed by a nationally known psychiatrist, to cooperate with the press and otherwise to foster the dissemination of sound psychiatric information to the public. Dr. C. Charles Burlingame, Chairman of the Committee, indicated that another important phase of the work would be to make known the Association's policy with regard to mental hospital standards, as the occasion required. He stated, "There are few mental hospitals in the country which even now attain the minimum standards of care as outlined by the Association, and from time to time there is danger of still further lowering of standards by reason of political manipulation, or through a lack of understanding that mental patients need and deserve to have the same high standard of medical care as obtains in the general hospital. One of the principal aims of this organization will be to acquaint the public with the fact that a well-staffed, well-equipped hospital for the care of the mentally ill is not a luxury, but a basic necessity in any civilized community."

Dr. Winfred Overholser, Superintendent of St. Elizabeths Hospital, has been appointed a Regional Chairman.

Colonel Harold W. Jones, Medical Corps, United States Army, announces that the **Army Medical Library** will gratefully receive any author's reprints. These reprints are placed in a special collection cataloged by author and thus form a ready bibliography of the work of any given writer and a valuable supplementary source of material when the volume of original publication is temporarily unavailable at the bindery or on loan.

Through an oversight, firms which donated prizes for the **Fall Tennis Tournament** were not mentioned in the last issue of the MEDICAL ANNALS when other details of the tournament were reported. They were as follows: Peoples Drug Store, Kinner & Membert, Gibson Company, Petworth Pharmacy, Mead Johnson & Company and Luzier's, Inc.

The Section on Pediatrics held its first fall meeting on October 31. Dr. S. J. Turnbull, Colonel, Medical Corps, U. S. A., spoke on "Medical Requirements for the New 'Streamlined Division'." At the business session preceding the address, the following officers were elected for the coming year:

Dr. Hugh J. Davis, *Chairman;* Dr. Charles A. Millwater, *Vice Chairman;* Dr. Margaret M. Nicholson, *Secretary-Treasurer.*

The Section on Neurology and Psychiatry presented the following program November 7: "Bilateral Intracranial Aneurysms with Rupture and Recovery," Dr. Walter Freeman; "Psychiatry and National Defense," Dr. Harry Stack Sullivan.

The Washington Ophthalmological Society met November 4 at the Episcopal Eye, Ear and Throat

Hospital. Dr. Phillips Thygeson of New York, guest speaker, presented a paper on "Conjunctivitis." Dr. Carl Henning gave a case report on "Macular Choroiditis." Case presentations were made by Drs. J. Thomas Schnebly, Inez E. Wilbur, Joseph Dessoff, Albert E. Meisenbach and Hector C. McKnew.

The Jacobi Society presented the following program on October 21: "Diseases of Ear, Nose and Throat Photographed in Color," Dr. Irvin Hantman; a motion picture, "De Lee's Science and Art of Obstetrics; Eclampsia—Seven-year History." The latter was shown by courtesy of S.M.A. Corporation and Petrolagar Laboratories, Inc.

The next lecture in the **Smith-Reed-Russell** series will be held on November 19 at 11:00 a.m. in Hall A of George Washington University School of Medicine. Dr. Ray Lyman Wilbur, President of Stanford University, will deliver an address on "Medicine in the Modern World."

The Medical Society of St. Elizabeths Hospital installed the following officers at its meeting October 22:

Dr. Ralph J. Haws, *President;* Dr. Irma Belk Hobart, *Vice President;* Dr. Manson B. Pettit, *Secretary-Treasurer.*

Following the business meeting, "Psychiatric Problems Concerning Military Conscription," was discussed by Capt. Dallas G. Sutton, U.S.N., Lt. Col. William C. Porter, U. S. A. and Dr. Harry Stack Sullivan.

Dr. William Gerry Morgan has been appointed a member of the Committee on Medical Preparedness of the American Gastro-Enterological Association.

Lieut. Comdr. Don Knowlton has left Washington for duty with the United States Fifth Marine Reserve Battalion, of which he is senior medical officer. During his absence his practice will be carried on by **Dr. Henry T. Kulesher,** who has been associated with Dr. Knowlton for the past six months.

Dr. Raymond W. Murray has accepted an assignment to active duty in the Medical Corps of the United States Navy, with the rank of Lieutenant Commander, effective November 15.

Dr. Irvin Hantman presented a scientific exhibit entitled "Diseases of the Ear, Nose and Throat Cavities—Photographed in Color," at the annual convention of the American Academy of Ophthalmology and Otolaryngology in Cleveland, October 6–10. An original technic of photographing the ear drum was shown in connection with this exhibit. Dr. Hantman has done research work at the Episcopal Eye, Ear and Throat Hospital. He was recently elected a Fellow of the American Academy of Ophthalmology and Otolaryngology.

Dr. James A. Gannon was appointed to the District Board of Education by United States District Court Chief Justice Wheat on October 14. He succeeded the late Gratz E. Dunkum. Dr. Gannon took the oath of office on October 23 in the presence of members of the Board of Education.

Dr. Grafton T. Brown was guest speaker at a dinner meeting of the Allegany-Garrett County Medical Society at Cumberland, Maryland on October 25. Dr. Brown spoke on "Hay-Fever," illustrating his talk with lantern slides.

(*Continued from page 400*)

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MEDICAL ANNALS
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RENAL INVOLVEMENT IN HYPERTENSIVE-VASCULAR DISEASE*

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Physicians who graduated before the first World War will remember the confusion surrounding the subject of hypertension and its relationship to kidney disease and arteriosclerosis. Richard Bright had sought a reason for the hypertrophy of the heart which he found in so many of his patients with kidney disease. He suspected an altered quality of the blood or an increased peripheral resistance. The celebrated paper by Gull and Sutton in 1872 on "Arterio-capillary Fibrosis" called attention to "the morbid change in the arterioles and capillaries as the primary and essential condition of the morbid state called chronic Bright's disease with contracted kidneys." Clinical sphygmomanometry (Von Basch) enabled Allbutt in England, Huchard in France, and a little later Janeway in America to make some noteworthy advances in the understanding of "non-renal" hypertension. Prior to their observations, which occurred about the turn of the present century, it was thought that arteriosclerosis was responsible for hypertension and that all such patients would die of chronic kidney disease. Allbutt, however, called attention to a large group of individuals in whom hypertension existed without any evidence of renal disease, and this process, widespread in the civilized world, has come to be known as essential hypertension.

There is little need to emphasize the importance of hypertension. According to the statistics of the Metropolitan Life Insurance Company every other individual in the United States past the age of 50 years dies of cardiovascular-renal disease. From other sources we have evidence that probably half of these deaths are due to essential hypertension, that is, that almost one quarter of all people past the age of 50 years die of the effects of hypertension on one or another of the vital organs. Thus essential hypertension becomes the gravest problem of middle adult life, not even excepting cancer. The hypertension arises from arteriolar vasospasm (whatever its cause may be) and after it has continued for years a compensatory reaction in the arterial system results in a diffuse hyperplastic vascular sclerosis, which, in turn is eventually responsible for failure of such vital organs as heart, brain and kidney.

This is a very different process from the senile sclerotic changes which occur in large vessels such as the aorta and its main branches. It is unfortunate that the term arteriosclerosis is used for both processes. Even the introduction of the modified term arteriolosclerosis to fit the hypertensive-vascular process mentioned above is not satisfactory. The similarity in the two terms leads to confusion. It has been generally accepted that essential hypertension is the best designation for the first process and hypertensive-vascular disease for the vascular reaction that results. The old term atherosclerosis is again becoming popular for the second group of disorders and thus we may permit arteriosclerosis to be an inclusive term comprising both forms.

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* Read at the Annual Scientific Assembly of the Society, October 16, 1940.

Now our first difficulty enters. While it is true, as stated above, that these are independent processes and can exist alone, that is, hypertensive-vascular disease without atherosclerosis and atherosclerosis without hypertension, nevertheless, they may coexist and frequently do. This is quite natural because hypertensive-vascular disease is one of the commonest disorders of middle life and atherosclerosis is the commonest disorder of late life. Consequently individuals with hypertensive-vascular disease live into the age period when atherosclerosis develops. Furthermore, there is some evidence that the progression of atherosclerosis may be accelerated by the hypertensive process.

What is the relation of these vascular disorders to kidney disease? Hypertensive-vascular disease, through its narrowing effects on the afferent arterioles of the kidney, may gradually lead to greater or lesser degrees of glomerular obliteration with tubular atrophy and interstitial fibrosis. This is the condition now often referred to as nephrosclerosis, the so-called primary contracted kidney of older writers and one of the varieties of chronic interstitial nephritis. In regard to the latter term it is interesting to recall the great controversy between pathologists and clinicians which gave rise to the false dictum, "there can be no correlation between clinical and pathologic findings in kidney disease." Processes such as atherosclerosis, chronic glomerulonephritis and pyelonephritis produce a scarred kidney which more or less closely resembles the organ resulting from hypertensive-vascular disease. Therefore, the older pathologists called them all "chronic interstitial nephritis" but were forced to admit that the gross scarring of the kidney at the postmortem table gave no indication of the number and condition of the functioning units that were present during life. Hence, they could not correlate their findings with the clinical picture.

We know that hypertensive-vascular disease may encroach sufficiently on kidney substance (nephrosclerosis) to lead to renal insufficiency and uremia but that this occurs in only about 10 per cent or less of individuals with essential hypertension. The reason is that before the kidneys are affected to a degree incompatible with life a more vital organ (heart or brain) has succumbed. As Allbutt expressed it, "the overstrained vessels in the brain will burst, the laboring heart will suffer defeat, before the symptoms of uremia are likely to make their appearance." Malignant hypertension, to be discussed, ends in renal failure more frequently.

Atherosclerosis affects the kidney to a minor degree so far as clinical results are concerned; that is, the process in the larger vessels may lead to gross scarring of the kidney, but so few renal units are involved that the effects usually are of little consequence. The slight albuminuria that may occur is of no clinical significance; too often, in the past, it has been accepted as evidence of progressive kidney disease that would lead to uremia. Again Allbutt succinctly stated the case for the senile arteriosclerotic kidney when he said, "It is a scarred but not a corrupt kidney, sufficient for the smaller life of an elderly man."

Nephrosclerosis, then, is the specific end result of the renal reaction to the hypertensive-vascular process. It leads to death from renal failure in 10 per cent or less of all instances of essential hypertension. Nevertheless, so common is essential hypertension that this 10 per cent is still much more important than glomerulonephritis as a cause of death, and vital statistics that give such prominence to "nephritis" as a cause of death are derived not only from the deaths caused by glomerulonephritis but also by nephrosclerosis and other conditions which are frequently included in the term cardiovascular-renal disease. It has been stated and should be emphasized that these diseases, while treated as a group for statistical purposes, must be dealt with separately if we are to advance in our knowledge concerning them.

It has been suggested that there are two main avenues of approach to chronic kidney disease; one is vascular and degenerative, embracing the term nephrosclerosis, and the other is inflammatory and embraces the terms glomerulonephritis and pyelonephritis. Renal failure may be brought about by either method. But whatever the cause of the renal impairment, the clinical manifestations may be the same; as the kidney fails its concentrating ability diminishes and waste substances accumulate in the blood. Eventually the clinical state known as uremia occurs.

Not all patients with cardiovascular-renal disease die in ways indicated above, because occasionally it seems as if there is an almost simultaneous disintegration of vital organs, and, of course, it is possible for intercurrent infection to carry away a subject who has been weakened by the gradual encroachment of these insidious processes on his vital organs.

Essential Hypertension

The most important aspect of this whole problem is the etiology of so-called essential hypertension which stands in the background of the widespread vascular disease and eventual organ failure.

As suggested in the previous discussion we were just beginning to feel that we had at last straightened out the relationships of essential hypertension, kidney disease and arteriosclerosis when the work of Goldblatt upset our recently achieved complacency. We had labored for more than a quarter of a century to free ourselves from the idea that essential hypertension was of renal origin, and now Goldblatt is leading us right back to the renal origin of essential hypertension in a brilliantly conceived and beautifully executed series of experiments. He has demonstrated for the first time the experimental production of a persistent hypertension in animals which has all the characteristics of essential hypertension in man, and he has produced this condition simply by the application of an ingenious silver clamp to the renal artery by means of which varying degrees of renal ischemia are produced. Within a short time persistent hypertension follows which varies in direct proportion to the degree of renal ischemia. Moreover, vascular and organ changes similar to those which result from essential hypertension in man are produced. As in man these vascular changes are especially well observed in the retina.

As a result of this work, many questions regarding the etiology and pathogenesis of hypertension arise. Is the hypertension produced through the intermediation of the nervous control of the kidneys, that is, nervous reflexes from the ischemic kidney, causing a generalized vasoconstriction, or is it a humoral mechanism? Is the ischemic kidney producing some effective substance which acts through the blood stream to produce a generalized vasoconstriction?

The first question seems pretty well answered in the negative. No matter what is done to the sympathetic nervous system of the dog, once the renal clamps are applied nothing will lower the blood pressure. In fact, the whole sympathetic nervous system can be removed and the hypertension persists. Once the importance of the sympathetic nervous system in the development of experimental hypertension had been excluded it was necessary to determine the possible relationship of certain glands of internal secretion. While I will not take time to cite these experiments in detail the work of Goldblatt and others suggests that the endocrine glands are not essential for the development of hypertension associated with renal ischemia but that they are important in determining the degree of response.

Now the question which interests us, if we are to compare this process to the problems of human hypertension, is this: Is essential hypertension in man also due to renal ischemia, and if so what is the mechanism? You will remember that we had previously convinced ourselves that the unimpaired renal function of essential hypertension meant that the kidneys were blameless. Now we have learned to differentiate this excretory function of the kidney from the circulatory function and to realize that the latter may be impaired while the former is normal. In this connection the very recent experimental work of Page and his associates must be mentioned. They feel that the stimulus to renal hypertension is not renal ischemia as such, but rather a reduction in pulse pressure within the kidney. A very ingenious model demonstrated this mechanism at the scientific exhibit of the last meeting of the American Medical Association. The renal ischemia which arises in the isolated kidney is the result and not the cause of the process which leads to the development of hypertension, according to these investigators. Regardless of this point, however, evidence is accumulating that suggests the renal origin of essential hypertension in man in a manner comparable to that of experimental hypertension in animals. Pathologic studies show the arterioles of the kidney involved to a much greater extent than are arterioles throughout the rest of the body in those patients with essential hypertension who have been studied at autopsy. Moreover, it is a striking fact that although arteriolar disease occurs in the organs of the individuals without hypertension it is almost never found in their kidneys, whereas in hypertensive individuals, in addition to the vascular disease of other organs, the kidneys almost never escape.

The problem today is essentially comparable to the older concept which disturbed the medical world for so many years concerning the relationship of hypertension and arteriosclerosis, except that it has been narrowed down to the kidney. As previously stated, it was originally held that arteriosclerosis caused hypertension; subsequently the pendulum swung in the opposite direction and it was concluded that hypertension caused arteriosclerosis (diffuse hyperplastic sclerosis). For a number of years we enjoyed considerable security in this conclusion until the work of Goldblatt led us back to the renal origin of hypertension. And now the studies of Moritz and Oldt raise the old question again: Does hypertension result because of a primary renal arteriosclerosis, or is it the other way around; are the renal arterioles peculiarly vulnerable to the effects of hypertension and hence show such a high incidence of arteriosclerosis in hypertensive subjects? Moritz and Oldt hold the former view and feel that their study lends pathologic confirmation to Goldblatt's work so far as human hypertension is concerned.

I am prepared to believe that interference with the circulatory function of the kidney is the pathogenetic basis for hypertension in man, but I am not at all persuaded that structural (arteriosclerotic) changes are primarily responsible. It seems to me much more likely that they are secondary to functional vasospastic changes such as we can so clearly observe in the retina. In this regard it is noteworthy that there is a very close correlation between retinal and renal arteriosclerosis which emphasizes the value of ophthalmoscopy in the study of hypertensive vascular disease.

Significant in regard to the mechanism just discussed is the work of Homer Smith, Goldring and their associates who employed diodrast, phenol red, and inulin clearances to determine renal blood flow in normal and hypertensive human subjects. They appear to demonstrate that there is a diminished renal blood flow in hypertensive subjects despite normal renal function. Furthermore, as Page also suggests, the renal blood flow appears to be controlled predominantly by the efferent glomerular arterioles.

Finally, some evidence for the renal origin of hypertension in man comes from a few cases that have now been reported in which unilateral renal disease seems to have been responsible for hypertension; at least the hypertension has promptly disappeared when the diseased kidney has been removed. May I say in passing that

I think we shall be disappointed in our efforts to cure hypertension by the removal of unilaterally diseased kidneys. I cannot take time to discuss this in detail, but probably the undetermined vascular disease of the supposedly healthy kidney will perpetuate the hypertension. The new emphasis on the renal origin of hypertension has been so exciting that we are in danger of being led astray from a practical treatment standpoint. This is not saying that the new orientation has not been good for us. Urologic investigation has assumed a new importance in the study of patients with hypertension; and vigorous efforts are being made to break down so-called essential hypertension into various groups, but these efforts are more determined than successful. Unfortunately, we are still a long way from understanding the cause of the majority of cases of hypertension.

Pressor Substances

A pressor substance had long been suspected as the cause of essential hypertension. Coincidentally with the observations of Goldblatt and his associates just referred to, there has been a renewed interest in this question. Recent studies indicate that a thermolabile, protein-like substance which can be isolated from the renal cortex is present in the normal kidney, but is found in increased amounts in the ischemic kidney of animals. It has been shown to exert a marked pressor effect upon the blood pressure. Thus, there is evidence in favor of a chemical stimulus of renal origin, exerting a generalized pressor effect upon the blood vessels, and acting independently of the central nervous system.

Psyche and Hypertension

It is generally admitted that psychic factors play an important part in essential hypertension. Thus, it is always emphasized that we must allow for the emotional element in individual blood pressure readings. It is also well known that rest and reassurance play a large part in the medical management of hypertensive patients both in relief of symptoms and in reduction of the blood pressure level. The early symptoms of hypertension are often exactly those of a psychoneurosis, and the relationship of emotional stress to the onset of hypertension and to the anxiety which is frequently responsible for the aggravation of existing hypertension are well known. Personality study often reveals a deep-seated conflict which stands in close relationship to this anxiety. Therefore, it may be said that in spite of the organic nature of experimental hypertension the central nervous system is not absolved as a factor in the etiology of hypertension in man. It is conceivable that a disturbance in the circulatory function of the kidneys could have its origin in impulses of central nervous origin.

I have attempted to discuss only some of the more recent studies which relate the kidney to the pathogenesis of hypertension. Etiologic factors such as heredity, race and geography I have considered in some detail elsewhere[1] and shall not take the time to repeat now.

Clinical Picture

It is well known that hypertension may exist for a long period without any symptoms whatever. When symptoms finally appear, they frequently arise from the organ or system that is bearing the brunt of the hypertensive-vascular disease process. Thus, the symptoms may be related entirely to the heart, or neurologic symptoms may predominate if the brain is chiefly affected. In terminal stages evidences of renal failure may dominate the clinical picture. However, as previously stated, many of the early symptoms are identical with those that are seen in psychoneurosis. Headache, dizziness, tinnitus, insomnia and fatigue are prominent symptoms and often are out of proportion to the amount of physical disease that is present.

The problem often met in practice is as follows: An individual of middle age applies for life insurance and high blood pressure and perhaps albuminuria are discovered. Insurance is refused, and, frightened or angry, the applicant seeks the advice of his physician. General physical examination with special attention to the cardiovascular system, particularly in respect to the size of the heart, the condition of the peripheral vessels, including those of the retina, plus tests of kidney function,* will enable one to establish a diagnosis in the majority of instances. The problem resolves itself, with certain very unusual exceptions, into the differentiation of glomerulonephritis from hypertensive-vascular disease. Usually, it will be found that the patient is suffering from essential hypertension and the end result, perhaps 5 to 10 years away, will be cardiac failure in about 50 per cent, intracranial accident (hemorrhage or thrombosis) in about 25 to 35 per cent and renal failure in probably less than 10 per cent. Other accidents and incidental infections account for the remainder of deaths.

If the end result is to be renal failure, the patient, usually over a period of years, will show gradual loss of concentrating power as determined by specific gravity tests of kidney function. The final event, renal failure ending in uremia, will be indicated by the onset of retinitis and progressive nitrogen retention. This change may come about with considerable rapidity; that is, patients who present the usual clinical picture of benign hypertension may quite suddenly complain of severe headaches, show a higher level of blood pressure, especially the diastolic element, increased eye signs (the result of actual retinitis), loss of renal concentrating power, nonprotein nitrogen retention and rapid progression to death. This acceleration of the hypertensive process has been called by Fishberg the malignant phase of essential hypertension.

MALIGNANT HYPERTENSION

Malignant hypertension and malignant nephrosclerosis are terms that have been used synonymously, but nephrosclerosis should be reserved clinically for those instances in which definite evidence of impairment of renal function exists. When essential hypertension occurs in young persons it is apt to run a more severe course. Volhard has said, "The younger the patient and the higher the diastolic pressure, the greater the danger of a malignant course." Such patients are much more likely to die of renal failure than patients with the clinical picture of ordinary benign hypertension. So definite is the clinical picture in this group of cases that the condition is looked upon by many as a distinct disease, quite different from benign hypertension. Keith, Wagener and Kernohan, who described a characteristic retinal picture for this condition, are responsible for the name malignant hypertension. The patient is usually young (less than 40); the pressure is very high, 250/160 being not unusual; and the retinal picture is characterized by arteriosclerosis of the hypertensive type, vasospastic retinitis and edema of the discs. The condition runs a rapidly fatal course (2 years or less) and often ends in uremia, although there may seem to be an almost simultaneous disintegration of vital organs. The differentiation of malignant hypertension from glomerulonephritis often presents great difficulties. Also, it may not be amiss to mention that the swelling of the optic disk may resemble choking of the disc, and this finding in the presence of intense headache, nausea and vomiting may be so suggestive of brain tumor that a number of such patients have actually been operated upon. Pathologically, the kidney presents a characteristic picture with necrosis of afferent arterioles, "necrotizing arteriolitis," and consequent widespread obliteration of glomeruli, which probably accounts for the rapid onset of renal failure.

I agree with many others that it is best to consider this process simply as a severe form of essential hypertension which may arise quite suddenly, usually in younger people, or that may engraft itself at any time on the benign form. The fundamental mechanism seems to be the same as in benign hypertension, namely, a vasospastic process of probable renal origin. The difference in the two processes appears to be simply a question of the degree of intensity. The process is accelerated in the malignant form. It is something like the problem of acute and chronic leukemia, which also are very different in their clinical aspects; so different, in fact, that many have maintained that they are distinct diseases. Carrying the analogy further, acute leukemia may even engraft itself on and terminate chronic leukemia.

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* Concentration tests, urea clearance and intravenous urography are commonly performed. Unfortunately, there are no simple methods available for testing the circulatory function of the kidneys.

Why the kidneys suffer a greater injury in the malignant form of essential hypertension is a difficult question to answer. For some reason, renal arterioles seem more vulnerable with respect to this severe vasospastic disorder, and hence the kidneys are the first organs to be destroyed.

Treatment

The treatment of nephrosclerosis, that is, the renal part of the picture of hypertensive-vascular disease, does not differ from the symptomatic management of the progressive loss of kidney function in glomerulonephritis. There is no specific drug or organ extract that will stop the process. The principles of management are the same: to maintain nutrition and supply an adequate amount of fluid for compensatory polyuria. When it comes to the question of renal failure occurring with malignant hypertension, the treatment again is the same as in uremia arising from glomerulonephritis. More important than the consideration of these end stages, however, is the problem of the management of essential hypertension which precedes nephrosclerosis. While it is not the purpose of this paper to deal with treatment in any detail, I must refer to a few principles of management in an effort to give a comprehensive picture.

Let us take again the example of a middle-aged man refused by a life insurance company because of high blood pressure. His physician rules out glomerulonephritis and decides that the patient is suffering from essential hypertension. Then, all too frequently, attention is concentrated on the effort to "bring the blood pressure down." The patient demands to know the blood pressure figure; on each visit to the physician he waits with anxious concern to hear the latest reading and frequently he has ideas of "stroke," "heart failure" or "Bright's disease" in the back of his mind.

Just what has been done to this poor patient in the effort to "bring his blood pressure down"? Because of an ill-founded idea that protein is responsible for hypertension and kidney disease he is denied meat and eggs, especially red meat, which for some reason is looked upon with particular dread. Then his diet is rendered even more unpalatable by the withdrawal of salt. One would sympathize with this half-starved victim of good intentions except that he probably would not be able to eat anyway, his teeth having been removed on the theory that focal infection has something to do with hypertension. Even before this period he has sacrificed his tonsils and has had his sinuses punctured because of the same theory. In case he actually had been able to eat some solid food, in spite of these previous therapeutic measures, the slight colonic residue was promptly washed out by numerous "colonic irrigations," especially during the period when the theory of autointoxication was enjoying a wave of popularity. To add to his unhappiness he may be told to stop work and exercise, and of course is denied alcohol and tobacco as well as coffee and tea. And now to cap the climax of his difficulties, the unfortunate person with hypertension seems about to fall into the clutches of the neurosurgeon, who is prepared to separate him from his sympathetic nervous system.

Prevention of Hypertension

While it is true that we do not know the cause of essential hypertension, we do know enough about the nature of this process to plan a more rational management. Evidence is increasing concerning the deep-seated constitutional nature of this disorder, and superficial efforts to lower blood pressure and one-sided approaches to the problems must be condemned.

What are the stressful or vasospastic agents, the effects of which we must try to minimize? First of all, there is the question of obesity, because the build and weight of the individual have been shown to be of real importance in the etiology of hypertension. I cannot discuss all of the dietary fads that have prevailed in regard to the treatment of essential hypertension. The question can be dismissed by saying that in spite of the dread of protein, and red meat in particular, there is no evidence to prove that protein bears any relation to the cause of essential hypertension and the same is true of salt, that is, sodium chloride. It is the total diet which is important and then only in relation to obesity.

A second and even more important consideration is the question of the toxemia of pregnancy. Recently it has been shown that almost one-half of all women who have toxemia of pregnancy develop hypertensive-vascular disease or chronic nephritis within a period of five years. This seems to be true of the milder degrees of toxemia as well as the more severe forms. The clinical deduction is obvious; if we are to prevent hypertensive-vascular disease and kidney disease we must make less effort to nurse these women through their toxemias and must make more effort to interrupt their pregnancies or induce labor. Ophthalmoscopic study is going to prove of inestimable value here, and the obstetrician will have to learn its value and use just as he has that of the blood pressure determination.

Focal Infection

When the chapter on focal infection is finally written, we shall find that we have been over-credulous in regard to this concept in the etiology of many chronic diseases. I refer particularly to the question of foci of infection as a cause of essential hypertension. There is no evidence that there is any real relationship between them, and this is just as true in regard to treatment. The removal of so-called foci of infection will not cure essential hypertension. This does not mean that foci of infection should not be removed from hypertensive or pre-hypertensive people, but only for the same purpose that they are removed in other people.

Tobacco seems definitely to be a vasospastic agent in some persons and had better be denied to hypertensives and candidates for hypertension.

The last consideration for discussion is the question of psychic factors in relationship to essential hypertension. When all is said and done, essential hypertension seems to be the result of the reaction of a predisposed individual to his environment. Therefore, it seems reasonable to study this individual in relationship to his environment rather than to throw up our hands hopelessly because of his predisposition. This calls for physical and mental hygiene in its best sense. Mental hygiene does not mean, as is so often the case, that the physician asks the patient, "Are you worried about anything?," and is satisfied with a negative reply. This, by the way, is the same physician who will say to the hypertensive patient, "Stop worrying" or "Go home and take it easy." The one approach is just about as ineffective as the other. There is only one method that has any merit, and that is to encourage the patient to talk about himself as a person rather than as a medical case. This must be done by skillfully guiding conversation rather than by asking direct questions. This will often succeed in bringing psychologic conflicts into the open. One caution for the physician is in order. It is much safer to listen than to talk. Heedlessly giving advice on important emotional factors carries with it many dangers.

Bringing the Blood Pressure Down

One of the greatest faults in the management of hypertension in this country has been the emphasis on "bringing the blood pressure down." We must look upon the blood pressure curve in the same way that we do the fever curve in an acute infectious disease and realize that it is just as wrong to fasten our attention on bringing the blood pressure down without understanding and treating the individual who has the blood pressure as to concentrate on reducing the fever. Please understand that I am not objecting to efforts to lower the blood pressure when combined with efforts to understand the patient who has the blood pressure. For the former purpose potassium sulfocyanate is again becoming popular, and while I will not take the time to discuss this treatment in detail I must emphasize that it should only be used with strict control for the level of blood cyanate.

We have paid altogether too much attention to physical measurements in hypertensive disease. While it is undeniably true that the size of the heart as determined by the X-ray, the height of the blood pressure as determined by the sphygmomanometer, the condition of the retinal vessels as determined by the ophthalmoscope, and the state of renal function as determined by the various clinicopathologic tests are all absolutely essential to the understanding of the hypertensive individual, they are only the beginning and not the end of the study. We must try to understand the total personality of the individual who has hypertension or who seems destined to develop it. It is the study of emotional factors which may provide us with the key to the successful management of the hypertensive individual.

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Hodgkin's disease is a fatal malady which begins by enlargement of the lymph glands of the neck and then the armpit, groin, middle chest and spleen. It is not uncommon and is usually accompanied by recurrent periods of fever, which are characteristic of undulant fever (brucellosis). The latter disease is also marked by enlargement of the spleen, swelling of the joints, neuralgic pains, profuse perspiration and increasing weakness and anemia.

The two authors isolated Brucella melitensis, the organism which causes undulant fever, from fourteen patients with Hodgkin's disease but from only one patient among a much larger group of persons suffering from diseases of the lymph glands other than Hodgkin's disease.

"Treatment of these fourteen patients," the authors say, "has been directed primarily toward the existing Brucella infection as a means of studying the influence of such infection on the course of Hodgkin's disease. A definite and often striking decrease in the size of enlarged lymph nodes has been observed after administration of sulfanilamide or sulfapyridine."

"Although the data presented in this study do not establish an etiologic (causative) relationship of Brucella to Hodgkin's disease," the authors say, "a sufficient correlation has been found to exist between the cultural and immunologic manifestations and the clinical course of these patients to justify the belief that the Brucella infection directly influences Hodgkin's disease. The frequent lack of all evidence of an immune response when Brucella could be isolated from blood cultures during recurrences of Hodgkin's disease has been very striking. Maximum clinical improvement in these fourteen cases has been found to coincide with the presence of serum agglutinins (antibodies) and significant degrees of phagocytosis (destruction of harmful organisms by the phagocytes, a type of white cell) for Brucella."

Vitamin B_1 Deficiency and Diabetes. A symmetrical peripheral neuropathy (disease of the nerves of the extremities) resulting from vitamin B_1 deficiency was found in nine, or 2.1 per cent, of 422 diabetic patients, Harry D. Fein, M.D., Elaine P. Ralli, M.D., and Norman Jolliffe, M.D., New York, report in *The Journal of the American Medical Association* for December 7, 1940. Administration of vitamin B_1 by mouth resulted in a cure of eight patients and improvements in the ninth.

Their findings were made in a study conducted to determine the incidence of the nerve ailment due to vitamin B_1 deficiency in a large group of diabetic patients and the response to specific treatment.

Pointing out that the diets prescribed for all of these patients were considered adequate as to the vitamin B_1/calory ratio, the three physicians say that "substitution of foods poor in vitamin B_1 (such as white bread or crackers) but containing equivalent carbohydrate and caloric values for prescribed foods richer in vitamin B_1 is common in all groups of diabetic patients. This was especially true in our patients because of their poor economic condition. In view of this it is surprising that a peripheral symmetrical polyneuropathy developed in but 2.1 per cent of the patients."

They point out, however, that there are several other possible contributory factors, the most important of which they believe to be arteriosclerosis (hardening of the arteries). This vascular inadequacy, the three physicians say, may require a higher concentration of thiamine or vitamin B_1 in the blood, to provide sufficient vitamin to the nerves, than in subjects with normal arteries.

Among the other possible factors they mention is the polyuria (excessive secretion and discharge of urine) accompanying glycosuria (presence of sugar in normal urine) which, if persistent, may cause an increased excretion of vitamin B_1 in the urine, rendering it less available for use by the body.

THE RECOGNITION AND TREATMENT OF THE VARIOUS FORMS OF PERICARDITIS*

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Pericarditis, or inflammation of the pericardium, is a cardiac problem of some importance, and presents many difficulties of clinical recognition both in its acute and chronic forms.

Clinical records indicate that, in many instances, this condition, occurring almost invariably as a secondary manifestation of some primary cardiac or noncardiac disorder, is often obscured and hence missed by the clinician. In consideration of the various procedures introduced during the last two to three decades designed for an adequate surgical approach to previously hopeless pericardial states the need for more prompt and accurate recognition of these elusive conditions is apparent. It is the purpose of this paper to demonstrate some of the more important characteristics of these conditions, emphasize diagnostic aids and important therapeutic considerations.

For purposes of this discussion, the inflammatory reactions of the pericardium are classified clinically into the following:

1. Acute pericarditis
    A. Fibrinous pericarditis
    B. Pericarditis with effusion
        1. Serous
        2. Purulent
        3. Hemorrhagic
2. Chronic pericarditis
    A. Cases of little clinical significance in which the chronic process does not produce abnormal myocardial changes
        1. Small localized areas of scarring, so-called milk spots
        2. Localized loose adhesions
        3. Generalized adhesions between the two pericardial layers without thickening
    B. Concretio Cordis—chronic adhesive pericarditis
    C. Accretio Cordis—chronic mediastino-pericarditis

Acute Fibrinous Pericarditis

Acute fibrinous pericarditis occurs more frequently than any of the other types of pericardial inflammation. It may occur as an isolated phenomenon, but it is often a precursor of pericarditis with effusion, purulent pericarditis, and of adherent pericarditis in cases of survival from the primary condition. Several cardiac and noncardiac states are commonly associated with this form of pericarditis.

Rheumatic Fever.—Frequently in the course of acute rheumatic fever an initial pericarditis of this type occurs. Incidences as high as 55 per cent have been reported by Bland and Jones[1] in postmortem records of 135 acute rheumatic fever deaths. Pericarditis may develop at any time during the active course of the disease, often appearing in the earlier weeks, and rarely complicating the convalescent period.

Symptomatic manifestations are commonly indefinite and often are indicated by an accentuation of the manifestations of the original state. However, precordial pain of variable intensity and a hacking cough are often associated with its appearance.

The single objective finding of greatest importance is the friction rub. This appears as a faint to harsh rub heard best in the region of the left second and third costosternal junctions. This sound is most commonly systolic in time but is often diastolic or to-and-fro in character. The occurrence of the rub in this area has been stressed by Wolffe and Digilio[2] as an early and frequent manifestation of rheumatic infection. They attempt to account for it on the supposed collection of inflammatory material in the sulcus formed by the aorta and pulmonary artery with the production of a periaortitis and peripulmonitis. Levine[3] stresses the frequency of occurrence of evidence of pericarditis in aortic valvular disease of rheumatic origin. Authorities indicate that this may arise as the result of direct extension through the thin aortic walls. Associated evidences of valvular involvement and disturbances of the conduction mechanism are valuable evidences, which, in the presence of a friction rub, suggest its rheumatic origin.

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*Read at the Annual Scientific Assembly of the Society, October 15, 1940.

It is quite likely that the fibrinous state is often a transitory initiator of effusions in a large number of cases. After recovery from the initial process the pericarditis is overshadowed by the typical valvular lesions and their resultant effects on cardiac activity.

Therapeutic measures in acute rheumatic pericardial involvement of this type are those symptomatic measures employed in the treatment of acute rheumatic fever.

Pneumonia.—Both types of pneumonia and other intrathoracic infectious processes are often responsible for fibrinous pericarditis, which in numerous instances precedes the development of the more dangerous purulent type. In a series of 62 cases of fibrinous pericarditis reported by Smith and Willius[4] 53.2 per cent of the group appeared to be associated with intrathoracic infections. Pneumonia appeared to be the most important etiologic type. Reimann[5] indicates an incidence of 2 to 3 per cent of pericarditis in all types of pneumonia.

Fibrinous pericarditis may also occur as the resultant of generalized infectious processes varying from osteomyelitis to pyelonephritis.

Chronic Nephritis.—The fibrinous form of this lesion is a very common late-stage complication in chronic nephritis, and other renal lesions associated with marked nitrogen retention. In Bright's original reports[6] of 100 renal cases, pericarditis was noted in 8. Barach[7] in summarizing the literature of this condition indicated an incidence varying from 4 to 14 per cent.

The clinical diagnosis is made by the demonstration of the pericardial friction rub, nearly always in the absence of any complaints referable to the heart. It is a sign of grave prognostic significance, and death as a rule occurs within two to three weeks after its appearance.

Coronary Thrombosis.—When the area of infarction involves an epicardial surface an associated localized fibrinous pericarditis and often a friction rub are observed. In Stewart and Turner's series[8] of 60 necropsies in cases of coronary thrombosis, 80 per cent revealed pericardial involvement. The greater number of cases were those of localized involvement. The occurrence of generalized involvement obviates the oft repeated clinical observation that posterior infarctions never produce a friction rub. While effusions are very rare in this type of pericardial disease, adhesions may occur.

Pericarditis with Effusion

This type occurs after an initial fibrinous pericarditis in many cases. The character of the fluid determines the type.

Serous effusions may occur with rheumatic fever, rarely with the pericarditis of coronary disease and uremia, but frequently as a result of tuberculous infection of the lungs or other organs.

Accumulation of fluid in the pericardial sac produces alterations in the size and shape of the heart and modifies the general circulation when rapid in development. Although the pericardial sac under normal conditions contains 10 to 50 c.c. of lubricating fluid, it is only after the accumulation of 500 c.c. that fairly uniform percussion and radiologic alterations can be demonstrated.

Certain well defined classical signs are only infrequently demonstrated, and it is probably in the demonstrable percussion and radiographic changes that one finds the best diagnostic aids. On percussion, the area of relative cardiac dullness is found to be pyriform with marked widening of the retromanubrial dullness. This area of dullness is markedly decreased when the patient assumes an upright position. This shift in dullness is the most reliable physical sign.

Ewart's sign, (dullness and bronchial breathing at the angle of the left scapula) is found with very large accumulations of fluid. It is a result of compression of the left lung. Other classical physical signs are either erroneous or very variable in their occurrence. The cardiohepatic angle is not obtuse as commonly described, but appears to be acute. The presence of a friction rub does not rule out an effusion. Distant and muffled heart tones are often suggestive of an effusion, but these may occur in other heart lesions as well. It is obvious that the presence of a large, tender liver is of little differential diagnostic import.

The radiologist offers some accurate aid in determining the presence of an effusion. The fluoroscope reveals the complete absence of pulsation in the presence of large effusions. Slight diminution of pulsations are noted in small effusions. The shadow on X-ray shows the rounded contours of the water-bottle heart in the upright position. In the recumbent position the basal shadow is markedly increased. The infallibility of the X-ray examination is subject to question when the shadow of a suspected effusion must be distinguished from that of a grossly enlarged and dilated heart.

Only when signs of circulatory embarrassment are present is any interference with the effusion indicated. The signs of the acute compression triad consist of a falling arterial pressure, a rising venous pressure and a small, quiet heart. The compression force must be removed by introduction of a needle into the pericardial sac. There are various sites of approach. The puncture, whether performed close to the xiphoid, at the left side of the sternum, or on the right side in the second, third or fourth interspaces, holds some risk. Tears in the auricle or injury to coronary vessels may occur.

Pericardial paracentesis is performed with a long needle of average calibre, attached to a large syringe and with a 3-way connection which allows the fluid to be aspirated and discharged without disconnecting the syringe. The most commonly used site is in the fifth left intercostal space just inside the left border of percussion dullness. The needle is pointed backward and inwardly toward the spine. The average depth of penetration is 3 to 5 centimeters.

Aspiration as a rule does not have to be repeated. Generally, serous effusion subsides, and if the effusion is purulent surgical drainage is usually in order.

Purulent Pericarditis.—This form presents a problem in which early recognition is imperative in order to save the patient from the combined circulatory and toxic load. This condition is never primary unless it is produced by penetrating pericardial wounds. It is especially prone to develop in connection with such thoracic infections as pneumonia, empyema, and in bacteremia and septicemia associated with acute osteomyelitis or other severe infections.

The physical signs are usually more characteristic than any given set of symptoms. It is probable that the friction rub can be elicited at some time in all cases and it is often present even in large collections of fluid. Signs of cardiac tamponade depend on the volume and the speed of the collection of the fluid. The radiologic picture is that of any pericardial effusion. Shipley, Winslow and Bigger[9] have indicated that adequate surgical drainage may reduce the mortality rate as low as 50 per cent in this almost fatal condition. Open drainage is the only adequate procedure. Various approaches are employed. Intercostal incisions, trephined sternal openings and epigastric approaches have been employed, but resection of one or more costal cartilages either to the right or left is the most successful approach.

In terminating our consideration of the problem of acute pericarditis one important diagnostic aid should be mentioned. Since the report of Scott, Feil and Katz[10] in 1929, an electrocardiographic pattern almost pathognomonic of acute pericarditis has been developed. The typical pattern consists of an elevation of the RT segments in the three limb leads and in the chest lead 4 R (apex of heart to right arm). These elevations are inconstant as to size and may appear with greatest intensity in lead 2 or in leads 1 and 2 together. These changes may be produced by any type of acute pericarditis but appear most frequently in cases of purulent carditis and hemopericardium. Significant electrocardiographic abnormalities occur with the greatest constancy in the acute types alone.

Chronic Pericarditis

Only the clinically significant groups of this condition will be considered.

Concretio cordis or chronic adhesive pericarditis is characterized pathologically by marked thickening of the adherent layers of the pericardial sac. Calcification may also be a prominent feature. This form may arise as the result of a previous tuberculous, rheumatic or other infectious pericarditis, but end-stages of tuberculous lesions predominate.

Chronic constrictive pericarditis produces a series of interesting alterations in the normal cardiovascular mechanism which are capable of recognition as a definite clinical entity and are amenable to surgical relief. The symptom picture is characterized by manifestations of a failing circulation. They consist of dyspnea (only on exertion), swelling of the abdomen, weakness, cough, edema of the lower extremities, and discomfort in the upper abdomen. The objective findings are overwhelmingly those of systemic congestion. An elevated venous pressure which fails to lower on rest and digitalization differentiates this condition from alterations due to myocardial functional disturbances alone. The elevated pressure produces the marked distention of surface veins, engorgement of the liver, elevation of the spinal fluid pressure, edema, and ascites commonly observed in these states. The arterial pressure suffers marked diminution. The systolic levels and pulse pressures are often very low, and the pulse is subject to diminution on inspiration (the paradoxical pulse). Other manifestations of clinical importance consist of systolic retraction in the region of the eleventh and twelfth ribs posteriorly and laterally due to traction on the diaphragm (Broadbent's sign). The X-ray is often an aid in the diagnosis of adhesive pericarditis, and calcified areas may also be revealed in these studies. The X-ray findings consist of evidences of diminution in cardiac pulsation, particularly in the right border, and other features emphasizing the fixation of the heart. Little evidences of cardiac enlargement are obtained. Electrocardiographic findings are not diagnostic and consist of low voltage and fixation of the electrical axis in some cases.

Chronic mediastinopericarditis is even a more serious manifestation than the above. The signs of circulatory embarrassment are the same. Retraction of the interspaces and Broadbent's sign may or may not be present. If there are associated myocardial lesions, cardiac hypertrophy is often great. Cardiac changes on X-ray are usually those already mentioned above, but evidences of mediastinal adhesions may be present.

The serious forms of this condition are amenable to surgical interference, and since Brauer's[11] original operation of thoracolysis was introduced in 1902 more and more excellent results have been reported. The procedure of thoracolysis consists in the removal of several ribs and costal cartilages on the left side over the precordium. It was designed for cases with extensive adhesions to the thoracic wall. Pericardial resection is designed to remove a greater part of the constricting pericardial wall. The medical treatment of chronic pericarditis is obviously less hopeful, and the response to ordinary congestive failure régime is often poor.

The splendid work of Beck[12] in perfecting the surgical treatment of constrictive pericarditis had made the original procedure more effective, and an increasing number of excellent therapeutic results are being reported in the literature.

(*Continued on page 454*)

VITAMIN C—A REVIEW OF OUR PRESENT KNOWLEDGE

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Since 1747 medical science has been aware of a substance present in various foodstuffs which protects against scurvy. In that year it was first discovered by Lind that the feeding of orange or lemon juice would cure scurvy. In 1804 the British Navy issued a regulation requiring each sailor to use one ounce of lemon juice daily. This practise greatly reduced the death toll due to scurvy and eventually eliminated it completely.

Progress in the study of this vitamin was slow through the years that followed and consisted mainly of adding to the list of foods which had a protective function against scurvy. Vitamin C was isolated from lemon juice by King[1] in 1932. Later in the same year Szent-Györgyi[2] reported that the "hexuronic acid" he had previously isolated from adrenal cortex had antiscorbutic properties and apparently was vitamin C. From then on, rapid progress occurred. The chemistry was investigated by a number of laboratories (Herbert et al.,[3] Karrer,[4] Micheel and Kraft,[5] and Von Euler and Klussmann[6]) with the eventual synthesis by Reichstein, Grussner and Oppenhauer[7] in 1933. Chemically, ascorbic acid is a six-carbon compound closely related in structure to the simple sugars. It is a potent reducing substance and its most important physiologic properties have been shown to depend upon its presence in the body in the reduced form.

The amount of vitamin C in foodstuffs is quite variable and is dependent on at least two main factors, (1) the natural potency of the foodstuff, and (2) changes which occur in the process of aging or preparing the food for use. The following lists are given from data obtained in our laboratory to indicate the natural potency of common foodstuffs in vitamin C: very rich: peppers, kale, cabbage, broccoli, cauliflower, spinach, oranges, lemons, grapefruit, limes, fresh strawberries; rich: new potatoes, turnips, green peas, green lima beans, tomatoes, pineapple; moderate: apples, bananas, string beans, cymling, squash, cucumber. It has been pointed out by King[8] that the actively growing part of the plant is particularly potent in ascorbic acid, and by Reid[9] that the greatest amount in the green plant is in the leaf.

It is of importance to be aware of those conditions under which the foods may be stored so that there is a minimum destruction of ascorbic acid. Cold storage at 45 to 50°F. will preserve the vitamin content for long periods of time. If rapid freezing methods are employed, care should be taken to destroy the enzymes by some method such as blanching in order to prevent their action during thawing. There is almost complete destruction of the vitamin by such processes as fermenting, curing, salting, pickling, prolonged heating, exposure to light and air, pressure cooking, presence of alkali or traces of copper, and drying unless carried out in the absence of factors which favor oxidation.[8] The principal losses of vitamin C in cooking result from passage of the vitamin, a highly water-soluble substance, into the cooking water. If the cooking water is retained in the prepared food, there is relatively little loss of vitamin C from the usual cooking procedures.

Therapy of Vitamin C

During the past few years many reports have appeared making various and sundry claims in regard to the therapeutic value of ascorbic acid. Of course, we must begin any discussion of this nature with a mention of scurvy. It is in this condition that ascorbic acid is unquestionably of specific value. We surmise that there is a state of subvitaminosis, which, so far as we can determine clinically at this time, is purely nutritional. In scurvy and subvitaminosis C the administration of large quantities of the vitamin is certainly indicated.

In addition to the above, there are several conditions in which it is felt that vitamin C is of rather definite value. We shall mention several and make an attempt to evaluate the claims made for them.

Alterations in physiologic states, not necessarily pathologic, may produce a change in the vitamin C requirement. Pregnancy and lactation fall into this group. Pregnancy brings about an increased requirement of the vitamin due to increased metabolism and to utilization by the fetus for normal growth and metabolism. There has been some disagreement between American and foreign investigators in regard to the relative distribution between mother and fetus, and as to whether or not the fetus is capable of manufacturing its own ascorbic acid.[10] The trend of investigations, however, seems to show that there is no great difference, if any, between the blood vitamin C levels of the two, and that the infant's supply is from the mother through the permeable placenta. This means that the pregnant woman should receive an increased supply of the vitamin during the period of gestation in order to maintain a normal nutritional state. During lactation there is a loss of vitamin C to the mother as a result of the secretion of 5 mg. per 100 c.c. in the milk.[11] In addition to that normally received in the diet, the administration of 100 mg. daily in pregnancy and of 50 mg. daily during lactation has been recommended to meet the demands.[12]

Those conditions in which the body manifests an increased oxidative process or increased cellular proliferation have been found to utilize vitamin C at a more rapid rate than normally. Hyperthyroidism stands out as a notable example of this.[13, 14] An increase in vitamin C intake would seem to be indicated as long as the hyperthyroid state exists.

Infectious diseases have been known for some time to be associated with a low concentration of vitamin C in the blood and tissues. Among the conditions which have been investigated rather extensively are diphtheria, rheumatic fever, rheumatoid arthritis, tuberculosis, pneumonia, whooping cough, osteomyelitis, coryza and sinusitis. The relation to diphtheria seems to be fairly well established.[15, 16, 17, 18, 19] There appears to be a detoxifying effect as well as inhibition of growth and diminution in virulence of the bacilli. There are a few contradictory reports such as that of Berger,[20] but these are in the minority. Rheumatic fever and rheumatoid states have been studied by Rinehart and his co-workers.[21] They appear to be able to reproduce the lesions of rheumatoid arthritis by placing experimental animals on scorbutic diets. Their results have not been confirmed by other workers, and, further, no marked clinical response is noted following the administration of ascorbic acid to rheumatic patients. It is true that rheumatic fever is accompanied by a low vitamin C level, but this is not a specific feature. This is also the case with tuberculosis,[22] pneumonia,[23] whooping cough,[24] osteomyelitis,[25] coryza and sinusitis. The list of infections could be made quite long, but space does not permit any further discussion on that point except to say that in none of these infectious states may the lack of vitamin C be taken to be of a specific nature or even of etiologic importance. It is more likely the result of the toxic state. We say "toxic state" advisedly because the fever element in the infectious diseases has been pretty well ruled out.[26] In fact, it was found by some workers that rather than a decrease following a course of hyperpyrexia, there is an increase in the concentration in the plasma.

Much has been written concerning the role played by the vitamins in gastrointestinal disease. Again, as in the infectious states, a deficiency in vitamin C is usually the result of some preëxisting pathologic state. The deficiency may arise either from poor absorption due to alteration in the state of the mucosa or from inadequate intake due to restriction of diet. The latter is particularly true in the case of peptic ulcer,[27, 28] because the ulcer patient does not tolerate well many foods that have a high vitamin C content.

The picture of frank scurvy manifests itself in the form of hemorrhages in mucous membranes and in subcutaneous and subperiosteal tissues of the body. As a result, practically every hemorrhagic condition has been treated with a course of vitamin C with varying success.[29, 30] However, we must not lose sight of the fact that there are nonscorbutic hemorrhagic states. In those cases in which response is attributed to vitamin C, there is some difficulty in determining the degree of saturation of the patient with ascorbic acid. In one report, the urine alone was used as an index, but this is inadequate, as will be shown later. Thus, most of these reports are of little value because of their incompleteness.

The effect of vitamin C in allergic conditions, particularly asthma, has been studied by several workers with results of very little significance.[13]

The sensitivity to intravenous arsphenamine has been investigated in relation to ascorbic acid, and, interestingly enough, it has been found that a high vitamin C intake inhibits the development of sensitivity in guinea pigs.[31] This work has been repeated and successful clinical studies have been reported.[32, 33] Dainow[33] suggests that the mechanism may lie in the retarded oxidation of arsphenamine. This is of significance and deserves further study and trial. If this decrease in sensitivity to arsphenamine is confirmed, vitamin C will become an extremely valuable adjunct to the armamentarium of the syphilologist.

The rapidity of healing of surgical wounds has been shown to have a relationship to the degree of saturation of the tissues with vitamin C.[34, 35] This is what might be anticipated since vitamin C does have a role in the production of fibrous connective tissue. This phase of ascorbic acid utilization is apparently on a sound basis, and clinical observations have shown that tissues which are well saturated with vitamin C do heal better and faster than those which are depleted.

Numerous other conditions have been mentioned as having deficiency of vitamin C as a basis with very little evidence to prove the validity of such claims.

Thus we see that there are some conditions, namely, scurvy, arsphenamine sensitivity, and surgical wound healing, which are definitely benefited by vitamin C administration. Further, those conditions which exhibit a deficiency of vitamin C as a secondary feature (infectious diseases, pregnancy and lactation, hyperthyroidism, gastrointestinal disease) should have an adequate supplementary supply in order to maintain a good nutritional state.

Diagnosis

The diagnosis of a subvitaminosis C state may be approached in several ways. The reliability of the different methods used varies greatly, and so a critical evaluation of these procedures seems quite timely and essential.

Aside from the symptoms and signs which appear as a result of bleeding, we find a group reported which, when viewed collectively, may be suggestive of the diagnosis but individually are passed by as being of no consequence or as being the result of some associated conditions. They are (a) loss of weight and anorexia, (b) progressive weakness or a general lack of physical tone, (c) dyspnea on slight effort, (d) pains in the legs and joints which the patient refers to as rheumatism, (e) apathy, lassitude and irritability, and (f) anemia which does not respond to liver or iron.[36, 37, 38, 39, 40] Some authors have also listed "dry, scaly skin" and "night blindness," but it is more likely that these conditions, when present, are due to an associated deficiency of vitamin A.

It is quite obvious, then, that we cannot rely upon clinical evidence alone to make a diagnosis of subvitaminosis C and must call upon other aids in our attempt to arrive at this end.

The first auxiliary to be utilized was the test of capillary fragility. This test is dependent upon the altered integrity of the capillary wall when a deficiency of ascorbic acid is present. The test which is used was devised by Göthlin.[41] This investigator subjected the veins of the upper arm to manometrically measured pressure. Each degree of pressure used must be lower than the diastolic pressure in the brachial artery of the patient being examined, and the skin area within which observations are to be made must be limited as to position, size and shape.

The exact method as described by Göthlin is as follows: A circular area 60 mm. in diameter is marked off in the antecubital space. The blood pressure cuff is placed at least 2.5 cm. above this area and pumped up to 50 mm. Hg pressure. This is maintained for 15 minutes, the pressure is then released, and the number of petechiae is counted. If many are present, the test is repeated on the other arm at a lower pressure of 35 mm. Hg. The response is graded according to the number of petechiae and the amount of pressure used:

Grade I.—No petechiae within examined skin area at a pressure of 50 mm. Hg in 15 minutes
Grade II.—Petechiae appearing at 50 mm. Hg, but the number not exceeding 6
Grade III.—More than 6 petechiae appearing at 50 mm. Hg, but none, or at most 2, at 35 mm. Hg
Grade IV.—At least 2 petechiae at a pressure of 35 mm. Hg

In order to be certain that this test is being carried out correctly, the room temperature must be such (16–21°C.) that there will not be any undue dilatation or constriction of the blood vessels. The examiner must make sure that the patient has not had a hot bath on the day of examination and, further, that he has not had any exercise within 3 hours. The readings should be made in the daylight.

In evaluating this diagnostic aid, we find that it suffers from a lack of specificity because of a number of interfering factors. Among the latter group we find such conditions as the thickness of the skin, the position of the arm (passive congestion), and anemia playing important roles. Further, in regard to specificity, a rather careful search of the medical textbooks has revealed approximately 40 distinct conditions in which the petechial hemorrhage test may be positive.[37, 38, 39, 40, 42] Thus, we may say that as an aid in diagnosis the capillary fragility test may be of some value, but only when it is used in conjunction with other procedures.

In 1937 Rotter[43] of Budapest described a test for diagnosis of subvitaminosis C. He utilized the power of ascorbic acid in tissues to decolorize the blue dye, 2,6-dichlorophenol-indophenol. This reduction reaction has been the basis of methods for the determination of vitamin C since it was first described by Tillmans.[44] Rotter felt that the ascorbic acid content of tissues in the living body could be ascertained by injecting this dye into the skin and noting the speed of its decolorization. He injected 0.1 c.c. of a 1 to 400 dilution of the dye into the skin of the volar surface of the forearm and felt that he could grade the degree of vitamin C saturation as follows: saturation cases, disappearance in less than 5 minutes; normal cases, 5 to 10 minutes; and unsaturated cases, longer than 10 minutes. The extreme simplicity of this test, in addition to the rapidity with which results were obtained, suggested that it might be a practical, although rough, clinical means of determining the degree of saturation of tissues with vitamin C.

This work was repeated and confirmed by Portnoy and Wilkinson[45] in England. However, several laboratories in this country have given the test a fair trial[46, 47] but have found no correlation between the length of time required for decolorization of the dye in the skin and the amount of ascorbic acid in the blood. This latter inconsistency was emphasized by Goldsmith, Gowe and Ogaard,[47] who postulated as to what might be the reasons for this state of affairs. The primary difficulty may be that there are several reducing agents in the skin of which vitamin C is but one. Differences in the circulation and the amount of oxygen available in the skin might influence the rate of reduction of the dye. Variations in room temperature and position of the arm could be important in this regard. The lymphatic drainage of the forearm might also be a factor in the rate of decolorization. With all of these possible variables entering into the reaction, the specificity of the test must naturally suffer, and at present it is not recommended by anyone as being of value in the diagnosis or even as an aid to diagnosis of subvitaminosis C.

In view of the failure of each of these clinical procedures to give any evidence that can be called definitely diagnostic of the state of vitamin C deficiency or sufficiency in the body, clinicians have turned to the laboratory for help.

The determination of the urinary vitamin C by indophenol titration is a rapid and convenient clinical procedure. However, this method must be classed among the tests which cannot be relied upon because it lacks specificity. There are several compounds commonly found in the urine which may be classed as interfering substances, since they reduce the 2,6-dichlorophenol-indophenol just as vitamin C does. These substances, namely, sulfhydryl compounds, thiosulfate and phenols, give enhanced values in a determination of the vitamin C content of urine by indophenol titration. Recognizing the lack of specificity of the indophenol and all other oxidation-reduction methods, Roe and Hall[48] developed a method for the determination of vitamin C based upon an entirely different chemical principle. This method is completely specific. By means of this procedure it has been shown that most of the values reported for urine ascorbic acid have been too high. However, this method is a laboratory procedure of involved nature and is not suitable for clinical usage.

A series of 50 apparently normal healthy medical students were studied in our laboratory from a viewpoint of urinary ascorbic acid excretion, and, surprisingly enough, 14 of this group had no vitamin C in the urine. There were no signs or symptoms of scurvy, frank or subclinical, in these individuals.

It has been recognized that a single determination of the urinary vitamin C of people using a normal diet is of no value whatever, and hence various tests have been proposed in which the urinary excretion of vitamin C is determined after the administration of massive doses of the vitamin. In the rather large number of these saturation tests proposed, the vitamin has been administered orally by some workers, and intravenously or intramuscularly by others. Space will not permit discussion of the individual tests. The normal response following the oral administration of 1,000 mg. of ascorbic acid is the excretion in the urine of approximately 500 mg. or 50 per cent of the test dose in 24 hours. Since 400 mg. or 80 per cent of the total excretion occurs in the first 6 hours after administration, most workers now use the 6-hour excretion test. With the "saturation" test some information is obtainable, but it lacks the dispatch essential for a clinical test and, furthermore, the results are not concisely interpretable.

Kajdi et al.[49] have proposed a saturation test which is based upon a determination of the ascorbic acid of the blood instead of the urine. In this test the plasma ascorbic acid is determined before and 4 hours after the intramuscular injection of 200 mg. of vitamin C. From these data is calculated the "vitamin C index," which is the initial plasma value multiplied by the increase in the plasma level 4 hours after injection of the vitamin multiplied by 100. A vitamin C index below 0.8 indicates clinical scurvy; indices between 0.8 and 6 show a very low ascorbic acid reserve in the tissues; and an index above 10 indicates a normal subject. With this test Kajdi obtained correct information in 68 out of 70 cases, which would indicate that his procedure is an excellent diagnostic test.

In clinical laboratory work we have usually considered the circulating level of a metabolic substance as being a measure of the amount present in the tissues. From this it would seem that the determination of plasma ascorbic acid in blood would come nearer to measuring the nutritional state of the subject than any other laboratory procedure.

The best method for determining the blood level of vitamin C is also based upon the reduction of the dye, 2,6-dichlorophenol-indophenol. In our work a modification of this method, that of Mindlin and Butler,[50] has been used. This method employs a photoelectric colorimeter which makes possible a greater degree of accuracy than is obtainable with visual titration. In our opinion, visual titration methods are unsatisfactory.

In order that the blood vitamin C estimation may be of value, it is necessary to make certain that the ascorbic acid content of the blood does not undergo alteration between the time of withdrawal of blood from the vein and the actual determination. It is, of course, preferable to make the determination without delay, but, realizing that this is not always possible, we found it of interest to make a general study of the preservation of ascorbic acid in drawn samples of blood. Early in our work it was noted that hemolysis resulted in a marked loss of ascorbic acid. We found it very important to use a thoroughly dry syringe and needle in collecting blood and to avoid excessive shaking or any other factor that would rupture the red cell. Other work in this laboratory has shown that blood contains a natural preservative system for ascorbic acid.[51] This system exists in the intact red cells. If one removes the plasma from the red cells, the plasma ascorbic acid disappears fairly rapidly. From our studies it became clear that the most effective way to prevent changes in the plasma ascorbic acid is to leave the intact red cells suspended in the plasma until the time of analysis and to establish conditions that will prevent hemolysis. If the red cells are hemolyzed, the ascorbic acid is oxidized by the released oxyhemoglobin; but, on the other hand, the red cells serve as an effective preservative agent if their biologic intactness is maintained. It should be stressed, therefore, that a blood sample showing the least trace of hemolysis should not be analyzed. If blood is collected without hemolysis and placed in a clean, sterile pyrex tube containing either 1 drop of 20 per cent potassium oxalate per 5 c.c. or 1 drop of 30 per cent sodium citrate per 5 c.c., the plasma vitamin C will remain unchanged for at least 12 hours at room temperatures or 52 hours at icebox temperatures.

Various observers have set up the following levels of vitamin C in blood as being standards by which we can classify subjects: saturation, 0.7 to 1.5 mg. per cent; subsaturation, 0.4 to 0.7 mg. per cent; and below 0.4 mg. per cent, unsaturation or scurvy.

During the past year we made a study of the blood levels of ascorbic acid as found in different economic groups. Medical students were taken as representing a middle economic group and inmates of the District Jail as representing a low economic group. Medical students and prisoners were selected in preference to hospital cases because of the large number of medical and surgical conditions which may influence the blood level of hospitalized patients. The subjects of this investigation were found free from disease processes as far as we could determine. Blood samples from the medical students were taken approximately 4 hours after the midday meal, with emphasis being laid on the requirement that a minimum of vitamin C-containing foods be ingested at the latter meal. These precautions obviated any false values which might have been obtained due to diet, since Greenberg et al.[52] have shown that within 4 hours following the eating of a meal containing large quantities of vitamin C, the ascorbic acid content of the plasma returned to the preingestion level. The members of the low economic group had blood taken within an hour after eating, since this was the only time at which they were available; but, as the results will show, the time of collection in these cases had very little effect.

The blood levels of the medical students are listed in table 1. It is noted that there is a range from 0.13 mg. to 1.68 mg. per 100 c.c., the general average being 0.76 mg. per 100 c.c. The students having the lower values were questioned and examined but no evidence of the reported picture of subclinical scurvy was found.

TABLE 1

The Vitamin C Content of the Blood of Medical Students

SUBJECT	PLASMA VITAMIN C	SUBJECT	PLASMA VITAMIN C
	mg. per 100 c.c.		*mg. per 100 c.c.*
R. O.	.13	T. H.	.76
D. E.	.19	K. A. V.	.83
M. C.	.20	M. A.	.84
S. C.	.24	L. A.	.87
E. D.	.27	H. O.	.92
I. R.	.31	F. O.	.92
B. R.	.32	K. L.	.95
S. T.	.36	M. C.	.95
P. A.	.36	B. R.	.97
S. T.	.37	S. I.	.99
F. A.	.37	K. A. V.	1.02
R. E.	.39	S. M.	1.03
S. K.	.44	P. E.	1.03
D. A.	.45	P. I.	1.03
K. A.	.48	L. A.	1.03
R. A.	.51	S. I.	1.04
J. O.	.54	B. O.	1.08
Z. Y.	.55	C. O.	1.13
B. O.	.56	B. R.	1.18
D. R.	.58	F. O.	1.22
T. H.	.58	Z. O.	1.22
D. O.	.65	S. C.	1.22
P. E.	.67	S. T.	1.24
S. A.	.70	B. E.	1.34
B. U.	.72	R. O.	1.41
B. L.	.72	T. E.	1.68
S. M.	.73		

Average .76 mg. per 100 c.c.

In table 2 are listed the blood levels of the inmates of the District Jail. The range is from 0.02 mg. to 1.13 mg. per 100 c.c. The latter figure is an isolated one which was found in an individual who ate a dozen oranges weekly, having them brought in from the outside. The general average for these men was 0.16 mg. per 100 c.c.

These men were investigated thoroughly as to whether there were any signs of subclinical or clinical scurvy present, both by physical examination and history, with rather negative results. These findings are in agreement with recent studies made upon children. Snelling[53] has reported a group of 48 artificially fed infants receiving little or no orange juice supplement, with an average plasma ascorbic acid value of 0.12 mg. per 100 c.c. Of this group, 3 had frank scurvy, but most of his cases showed no evidence of clinical scurvy. Snelling concluded that a low plasma ascorbic acid content cannot be used alone as a standard for the diagnosis of scurvy.

TABLE 2

The Vitamin C Content of the Blood of a Group of Subjects in a Penal Institution

SUBJECT	PLASMA VITAMIN C	SUBJECT	PLASMA VITAMIN C
	mg. per 100 c.c.		*mg. per 100 c.c.*
J. S.	.02	A. G.	.13
C. H.	.02	G. W.	.13
L. D.	.02	W. B.	.14
N. G.	.03	C. L.	.14
M. P.	.04	R. D.	.14
L. I.	.04	G. S.	.15
C. D.	.05	C. G.	.15
H. R.	.05	F. R.	.15
H. M.	.05	G. I.	.16
C. H.	.07	S. B.	.16
R. B.	.07	J. W.	.20
E. F.	.07	B. U.	.20
C. L.	.07	M. K.	.21
E. S.	.07	W. M.	.21
M. P.	.08	J. K.	.21
P. A.	.08	C. K.	.22
J. H.	.09	H. C.	.23
E. J.	.09	L. S.	.25
C. W.	.09	W. L.	.28
H. H.	.09	H. C.	.28
F. S.	.10	T. R.	.34
P. S.	.10	J. L.	.35
M. I.	.10	D. F.	.35
E. S.	.10	K. E.	.44
J. O.	.12	J. W.	1.13

Average .16 mg. per 100 c.c.

From our studies concerning clinical diagnostic procedures and criteria, we came to the following conclusions.

1. Of the various laboratory procedures used, the determination of the ascorbic acid of blood plasma gives the most valuable evidence.

2. The blood level of vitamin C may be inter-

preted as being an approximate indication of the tissue level.

3. The blood levels for the establishment of vitamin C sufficiency which have been set up as standards are entirely too high. This is probably due to the methods used. Visual titration methods tend to give higher values than methods using a photoelectric colorimeter.

4. The existence of a very low level of vitamin C in blood is not diagnostic of scurvy, but may be taken as an indication of a poor state of nutrition with respect to vitamin C intake.

5. Our work thus far does not indicate the existence of subvitaminosis C as a clinical entity.

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THE SIGNIFICANCE OF BLEEDING FROM THE URINARY TRACT*

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A passage of blood in the urine is such an alarming incident to the average patient that it is rarely ignored. Statistics show, however, that a urinary examination is not made until after the third attack of bleeding has occurred. Such procrastination is to be deplored when one realizes that malignant tumor, stone, tuberculosis, nephritis and other serious diseases are frequently ushered in by a passage of blood. The fact that the bleeding is usually intermittent, painless and of short duration lulls the patient into a false sense of security. Generally speaking, urinary bleeding is a symptom of adult life, occurring in most cases between the ages of 35 and 60 years. The incidence rises with age. Males are affected more often, two and a half to one, owing to the frequency with which vesical tumors are found in this sex, three and a half to one.

The passage of blood is the most significant single symptom in the urologic field. Except in postoperative instances, it is rare for hematuria to assume sufficient proportions to be alarming. One's energy, therefore, should be directed to the cause of the bleeding, and one should regard the temporary loss of blood as incidental. After the initial attack has subsided, the patient usually assumes an air of indifference and tends to ignore other important symptoms, such as tenesmus, pain and frequency of urination. The stress of modern-day economic instability furthers this attitude of indifference to such an important finding. The patient's interest is reawakened only when the next attack of bleeding ensues. Periodic insurance examinations and other medical educational activities have caused patients to become more health-conscious and therefore more amenable to medical advice. It is indeed fortunate for the patient with cancer of the urinary tract that bleeding is found so frequently with this condition as it is one symptom he will not ignore. It behooves physicians to realize the seriousness of this finding and to recognize the fact that it is a danger signal and not to be treated as a clinical entity. To emphasize this fact and not to present new ones is the object of this paper. Every patient presenting this symptom should be subjected promptly to a complete general as well as urologic study while the attack of bleeding is in progress. At this time the source can be determined more accurately and the probability of a cure is thus increased. Such an examination is, of course, contraindicated in the presence of acute urethrocystitis and prostatitis.

The greatest single advance in the handling of malignant conditions has been the realization on the part of the laity of the importance of early recognition and treatment of such conditions.

Approximately 5 per cent of all patients admitted to the hospital show red blood cells in the urine, and one fourth of all patients with urologic disease, excluding venereal diseases, present this finding. MacKenzie[1] analyzed 2,242 cases of hematuria and observed that in 53 per cent the bleeding came from the kidney and the ureter. In 20 per cent it was vesical in origin, in 18 per cent it was prostatic, and in 6 per cent it came from lesions in the urethra. The majority of those passing blood in the urine were found to have a serious disorder of the urinary tract. Cases of microscopic or gross hematuria may be divided into four groups: those in which the bleeding is due to systemic conditions (20 per cent), those in which it is due to urogenital or local causes (70 per cent), those in which it is due to involvement from adjacent structures (8 per cent), and those in which it is due to trauma, including that from foreign bodies (2 per cent).

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* Guest Speaker's address before the meeting of the Tennessee Valley Postgraduate Medical Assembly, Knoxville, October 10, 1940.

Among the general or extrinsic causes of bleeding are included the blood dyscrasies. In the congenital hemophiliac group (thromboplastin deficiency) the coagulation of the blood is delayed, the number of blood platelets is normal and the clotting time is prolonged. The purpuras (simplex, infectious, mechanical, fulminans, anaphylactoid, symptomatic and thrombopenic), on the contrary, present normal blood clotting time, whereas if the number of blood platelets is decreased, the bleeding time is greatly prolonged and the red blood cells are more fragile. Scurvy and other vitamin C deficiency diseases also produce bleeding. The administration of vitamins P and K or the sodium salt of ascorbic acid is helpful in such cases. I have successfully used moccasin venom in a case of unexplained hematuria. Polycythemia vera, the leukemias, Hodgkin's disease and lymphosarcoma also cause hematuria.

Urologic diagnosis has assumed the proportions of an exact science and has largely eliminated many of the early pitfalls found in this specialty. It is therefore encumbent on physicians to recognize hematuria as a serious, even alarming symptom and to see that the patient is subjected to a complete examination during the first attack of bleeding if they are to reduce the incidence of death from malignant tumors and other serious diseases involving the urinary tract.

Bleeding from inflammatory lesions situated in adjacent structures, such as the appendix, uterus and ovary, is significant. Malignant tumor of the cervix not infrequently involves the ureter and bladder. Dissecting aneurysm of the abdominal aorta was found by me to produce hematuria in one instance, and thrombosis of the vessels of the mesentery was found to produce hematuria in another instance.

Local or urogenital lesions are the most frequent cause of serious bleeding and may be grouped under five principal headings in the order of relative frequency: general infections, neoplasm, tuberculosis, trauma from stone or other cause, and nephritis. Cases due to these conditions comprise about 70 per cent of the total, and the bleeding should always be considered as of grave import.

Neoplasm of the urinary tract is usually characterized by painless profuse bleeding, often of short duration. Obviously, such cases require early and prompt recognition, as the mortality rate for the first five-year period is very high. Roentgen rays of high voltage are of limited value in the treatment of renal tumors, as it has been found impossible to deliver more than two thirds of a curative dose of the rays to the kidney area. Such treatment is of value, however, in reducing the size of certain radiosensitive tumors so that removal is facilitated. Roentgen rays are occasionally helpful in arresting bleeding from vesical or prostatic cancer.

Tuberculosis is the next disease most likely to cause hematuria, and this symptom was found by MacKenzie[1] in 59 per cent of patients suffering from renal tuberculosis. One of the first signs of such a lesion is the presence of red blood cells in the urine. Another is unexplained albuminuria. Tenesmus and frequency of urination appear as soon as vesical involvement becomes pronounced. If the tuberculous process is unilateral and has produced definite cavity formation shown by a urogram, with vesical changes on the affected side, the logical treatment, in my opinion, is nephrectomy. Howard[2] has demonstrated that if the ureter is sutured to the skin when the kidney is removed, primary healing will be effected. This procedure completely eliminates one of the troublesome complications of this operation. Bilateral involvement of the kidney is found in 20 per cent of all cases of tuberculosis of the urinary tract. It is probably best handled by nonsurgical measures if both sides are equally affected.

Red blood cells are often found in the urine when there is infection of the upper part of the urinary tract by colon bacilli, streptococci, staphylococci or other organisms. Such infections contribute the largest proportion of the total number of cases of hematuria, although the urine shows blood in only about 10 per cent of such infections. The presence of pus in the urine, a positive culture, and evidence of pyelectasis or ureterectasis confirm the diagnosis.

Other infectious processes found in the pelvis of the kidney, ureter and bladder are the chronic proliferative lesions, such as cystitis cystica, follicularis and glandularis. I have seen many such cases, all verified by positive biopsy findings. In most instances the attack was either initiated or followed by bleeding. These lesions are very difficult to eradicate, owing to the fact that the infection is caused by the colon bacillus and is of a long-standing, low-grade type. The patient complains of tenesmus and pain on urination as severe as that experienced in tuberculosis of the bladder or interstitial cystitis.

Congenital anomalies, cysts, hydronephrosis and papillitis contribute a small number of cases of bleeding from the upper part of the urinary tract.

When there are renal and ureteral calculi, blood is usually present in the urine at some time, although it is rarely profuse, and the bleeding is usually accompanied by colicky pain on the affected side, particularly if the ureter is blocked. If the stone is situated on the right side, one must consider the possibility of associated appendicitis. Statistics show that in one third of such cases appendectomy has been performed without relief of the initial symptoms. Except when the abdominal condition is very acute, one should take sufficient time to make a plain roentgenogram, and, if necessary, an intravenous pyelogram. These procedures will not unduly disturb the patient. If any doubt exists, however, it is generally agreed that it is better to remove a normal appendix than to permit a suspected one to rupture.

A foreign body in the female bladder may cause bleeding, as I have found on cystoscopic examination in a number of instances. Suture material has been found in the bladder wall in a case in which there had been surgical operation on the organs of the pelvis. This produced incrustation, irritation and bleeding. Infection of the bladder by parasites, such as *Schistosomum haematobium*, is a common cause of bleeding in patients from the tropics. Caruncle of the urethra in elderly females not infrequently produces bleeding. I recall an instance in which the patient became almost exsanguinated on sloughing of the urethra following an attempted cauterization of the caruncle and urethra by another physician. The patient was totally incontinent afterward and required a plastic operation on the urethra to effect control of urination.

Bleeding in the lower part of the urinary tract may result from overzealousness on the part of the urologist using radium in the treatment of a malignant neoplasm of the prostate. I have also observed a number of instances in which burns of the bladder were produced by radium used in treating carcinoma of the cervix.

The term "essential or idiopathic hematuria" is gradually disappearing from the literature. A better term for the condition indicated by it would be "primary unexplained hematuria." In Workmen's Compensation cases one occasionally sees bleeding in a patient in whom repeated examinations disclose no evidence of disease of the urinary tract. Before one is justified, however, in assuming that such bleeding is idiopathic one must show by repeated examinations that there is no evidence of infection, that the pyeloureterogram and renal function are normal.

When one obtains a history of an injury to the urinary tract, bleeding will usually be found on examination of the urine, the amount varying from a few cells to profuse bleeding, depending on the degree of injury. My co-workers and I,[3] in experimental work on rupture of the kidney, using animals as the basis of observation, found that the first evidence of injury to the kidney is in or near the hilus of the kidney. The blood vessels in this area are very fragile and tear easily. I[4] recall a patient who sustained an accidental injury of a mild degree and was admitted to a hospital. He was examined by a general surgeon and was discharged from the hospital as cured. One month later, however, he was readmitted to the hospital, complaining of a mass in the right loin and showing red cells in the urine. The urologic study disclosed that he had a large perirenal tumor. This contained when evacuated 1,600 c.c. of fluid. Rupture through a minor calix of the kidney had caused the extravasation.

Painless profuse bleeding usually indicates the presence of a tumor in the kidney, ureter or bladder. If pain and bleeding are present in a young adult, tuberculosis must always be considered. Colicky pain and the presence of red blood cells in the urine are suggestive of stone, whereas the added presence of pus in a person under 40 years indicates an infectious process. The character, onset and degree of bleeding are poor criteria as to the source and should never be used as a basis of diagnosis. The same principle applies to the use of the three-glass urine test. The fact that the bleeding is initial or terminal is also unreliable in determining the source.

Intravenous pyelography has proved of great value as a preliminary survey of the urinary tract. This modality, however, should always be followed by a cystoscopic examination to confirm the presence of surgical lesions as excretory urography is not conclusive when used alone. In the diagnosis of such diseases as tuberculosis, neoplasm, hydronephrosis and obstruction, retrograde pyelography is necessary to delineate the finer points of the diagnosis. I recall an instance in which a roentgenologist made a diagnosis of stone in the upper portion of the ureter, after making an intravenous pyelogram. His erroneous conclusions were based on the fact that the ureter was kinked at one point and cast a heavier shadow. The patient continued to bleed, however, and a careful cystoscopic check-up later showed that she had a malignant tumor of the bladder. The case is cited merely to show the danger of attempting to make a diagnosis from a partial examination. It also illustrates the need of close collaboration between the urologist and the roentgenologist.

Recently a number of articles have appeared in the literature reporting cases in which sulfathiazole and sulfapyridine (2-sulphanilamido-6-amino-pyridine) produced hematuria by the precipitation of their respective crystals in the urine. Bleeding from this source always indicates the need for prompt withdrawal of the drug. Other drugs which occasionally cause bleeding are methenamine, cantharides, turpentine, quinine and histamine, as well as the azo dyes benzochrome and pyridium. Such foods as rhubarb, artichoke and cauliflower may produce red blood cells in the urine by the precipitation of oxalate crystals.

Occasionally persons who have applied for life insurance are found to have red blood cells and albumin in their urine. Repeated examinations may, however, disclose no evidence of urogenital disease. Such applicants should be impressed with the fact that two or more urologic studies should be made at stated intervals before it can be definitely said that there is no evidence of disease of the urinary tract. If the tests are normal, there is no reason why such applicants should not be restored to a normal rating.

In a patient who has suffered an attack of pyelonephritis one should always look for evidence of hypertension. I have seen several patients in whom hydronephrosis and hypertension coexisted (vascular sclerosis). Ischemia of the kidney when produced experimentally will cause elevation of the blood pressure.

Nephritis, both acute and chronic forms, shows blood in one fourth of the cases and may follow an acute infectious disease. The urine usually contains casts, and the blood pressure may be elevated.

Among diseases of the lower portion of the urinary tract, vesical neoplasms and prostatic hypertrophy contribute 75 per cent of the cases of hematuria. In lesions of the bladder and prostatic urethra, cystoscopic study affords a very exact means of determining the source of the bleeding. Benign hypertrophy of the prostate is more apt to bleed than carcinoma. Cancer comprises one fifth of the total number of cases of prostatism. If bleeding is found in a person past 50 years of age a rectal examination should always be done to rule out prostatism and cancer.

Vesical tumors comprise the most important group of cases in which bleeding occurs in the lower part of the urinary tract. The first symptom of tumor is painless profuse bleeding. Tumor of the bladder should always be regarded as malignant clinically and early removal advised. It responds well to transurethral fulguration and implantation of radon seeds. The infiltrating type of tumor should be resected if possible. Ash[5] studied a large number of cases from the bladder tumor registry of the American Urological Association and found hemorrhage to be the first symptom in three fourths of the cases. He noted the severity of secondary reactions following the use of roentgen rays of high voltage and found that the end results did not justify the routine use of such therapy.

Cystitis, diverticula, stone and elusive ulcer complete the principal sources of hemorrhage from the bladder. Hematuria in connection with either specific or nonspecific urethritis is the only type of bleeding that contraindicates instrumentation. In such a case, intravenous pyelography is indicated. Stricture, foreign bodies, polypi, granular urethritis and prostatitis not only show hematuria but pyuria as well. Passage of blood in the semen is indicative of an affection of the prostatic urethra or verumontanum.

In cases of unexplained hematuria a careful history will rule out familial or vicarious bleeding. The physical examination will include study of a complete hemogram, with a search for immature red cells and other abnormal blood elements, determination of the bleeding and the clotting times, the clot retraction test, the fragility of the red blood cells, and the blood platelet count.

It is encumbent on physicians to recognize hematuria as a serious, even alarming symptom and to see that the patient is subjected to a complete examination during the first attack of bleeding if they are to reduce the incidence of death from malignant tumors and other serious diseases involving the urinary tract.

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Suggest Possible Way of Eliminating Some of Morphine's Disadvantages. The possibility of eliminating some of the disadvantages associated with the use of morphine, considered the best pain relieving drug the physician has at his disposal, by combining it with another drug, prostigmine methylsulfate, is suggested by Donald Slaughter, M.D., J. Charles Parsons, M.D., and H. Deane Munal, M.D., Dallas, Texas, in *The Journal of the American Medical Association* for December 14, 1940.

Reporting on their experiences with using a combination of the two drugs in a series of approximately 100 patients, the three physicians say that their study indicates that one half of the accepted dose of morphine when combined with prostigmine methylsulfate gives as good relief as the large dose of morphine.

The disadvantages of the use of morphine include a frequent undesirable constipation. "Further," the three men say, "when morphine is given over long periods of time, tolerance develops, and addiction may be the end result. Still another drawback to morphine is the frequent necessity of giving large doses, which more quickly leads to tolerance and addiction."

Not only did the three Texas physicians find the combination of the two drugs an efficient pain reliever but also they say it is an excellent sedative before an operation. There were no untoward effects in the group of patients they report on.

In a case of a patient addicted to the use of morphine they used the combination with results that lead them to say they lend encouragement to the use of this combination in similar cases.

"One of us," they report, "is at present investigating the angle of tolerance and addiction in dogs, and preliminary work indicates that prostigmine methylsulfate lessens tolerance and decreases the chances of addiction.

"It is hoped that this report will stimulate other clinical research as regards this problem."

MYCOTIC ARTERIOVENOUS FISTULA

REPORT OF A CASE

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Bacterial invasion of the wall of an artery, or vein, of such nature as to produce an aneurysm, known as mycotic aneurysm, is uncommon. Its occurrence is considered of sufficient interest to warrant the publication of a report of the case. An arteriovenous fistula of bacterial embolic origin must be a great rarity. It must be admitted to begin with that the diagnosis in the case here reported under that title was a clinical diagnosis only, and that an opportunity to verify it post mortem was not vouchsafed. However, as the discussion reveals, the diagnosis was extremely probable.

The only reports of mycotic arteriovenous fistulae we have been able to find are the three abstracted by Holman[1] in his book "Arteriovenous Aneurysm." In 1904 Simmonds described an arteriovenous aneurysm of mycotic origin between the aorta and the superior vena cava in a woman of 31 who had bacterial endocarditis caused by Streptococcus viridans. A large defect of the aorta opened into an egg-sized aneurysmal sac which in turn opened into the vena cava. Libman in 1906 reported the case of a large sacculated aneurysm connecting the femoral artery and vein by large openings in a man aged 36 who also had bacterial endocarditis caused by Streptococcus viridans. A large thrombus partially occluded the ulcerated opening in the femoral artery. Rolfe (1921) wrote concerning a mycotic communication between a femoral artery and vein in the case of a woman aged 25 who had bacterial endocarditis; blood from the heart yielded both a streptococcus and Staphylococcus aureus.

Mycotic aneurysms develop in the course of a septicemia, most often one associated with bacterial endocarditis. When small or medium-sized vessels are involved the lesion is probably due to direct lodgement of infected emboli in the lumen of the vessel, often at its bifurcation. Ulceration of the wall of the artery follows and a bulge or aneurysm results from localized weakness. It is quite conceivable that the ulceration might extend through the wall of the artery and into its venae comites, thus producing an arteriovenous fistula. When mycotic aneurysms form in large arteries, such as the aorta, it is most probable that the infection of the artery results from the lodgement of minute emboli in the vasa vasorum.

The mesenteric, cerebral and superficial peripheral arteries are most often affected. Symptoms may be lacking, or consist of pain and swelling at the site of involvement, or result from rupture of the aneurysm and hemorrhage into the tissues or organ affected.

Arteriovenous fistulae give distinctive physical signs, the small ones mainly local signs, the large ones both local and general.[2] The local signs are an intense thrill felt over the site of the fistula and transmitted some distance distally and a lesser distance proximally, and a loud systolic murmur heard for great distances above and below the fistula. Dilated veins are noted with larger fistulae, and the blood drawn from them is more arterial than venous. The affected part is larger and warmer than normal, and mild trophic changes may exist. General symptoms are an increase in pulse rate and pulse pressure, both of which promptly return to normal when the fistula is closed by pressure.

An aneurysm rarely produces a thrill, but, if so, it is confined to the site of the aneurysm. The same is true of the murmur. Although localized swelling is more prominent, the other local signs and the general symptoms are not present.

Pulsations in the arteries distal to a fistula are often absent, whereas in the case of an aneurysm they are usually present. Edema is uncommon with either.

REPORT OF CASE

The patient, a single woman aged 22 years, began to have fever on February 8, 1940. This was preceded by vague pains in the joints of the fingers and a great toe for a day or so. She had had scarlet fever at the age of 5 years, following which a cardiac murmur had been discovered. The tonsils had been removed soon afterward. Examination was essentially negative except for the presence of the signs of aortic regurgitation and moderate enlargement of the left ventricle. An irregular fever persisted until the day of her death, September 16, 1940. The temperature was elevated almost daily, but usually to not more than 101°F. Occasionally it rose to 103°F. and rarely higher for a few days. The heart rate was relatively slow, ranging between 85 and 100 most of the time. Several blood cultures were negative. A moderate anemia developed and persisted, the hemoglobin fluctuating usually from 50 to 60 per cent, the erythrocyte count ranging in the neighborhood of 3,000,000 per cu. mm. of blood. The white blood cell count varied from 4,600 to 10,750 per cu. mm. of blood, usually being about 5,500 to 6,000; the segmented leukocytes constituted about 60 per cent and the band forms about 5 per cent. Numerous urinalyses were essentially normal. An electrocardiogram made on March 25, 1940 was essentially normal except for some ventricular premature beats. The blood pressure was usually about 120 systolic and 35 diastolic.

Sulfapyridine was given for several weeks in sufficient amount daily to keep the sulfapyridine blood level between 6 and 12.4 mg. per cent. For a few weeks before death sulfathiazole was given in amount sufficient to keep the sulfathiazole blood level between 4 and 7.7 mg. per cent.

By April the fingers were noticed to be slightly clubbed, and the spleen was found to be just palpable. Later the spleen became larger, extending down more than two fingerbreadths. For a while in April there was some pain in the wrists, elbows and ankles.

In May repeated attacks of epigastric crampy pain associated with nausea occurred over the period of a week. In the latter part of May severe pain developed in the right leg from the knee to the ankle, with greatest intensity in the upper part of the calf. This pain persisted for several weeks, requiring numerous injections of morphine. Finally cobra venom was used parenterally, apparently with success, since after two weeks the pain had completely subsided and did not recur until shortly before death. During the weeks in which the pain was present there was excruciating tenderness of the right calf and aggravation of the pain on motion of the leg.

At first, soon after the pain in the leg had developed, there was some enlargement in the upper part of the calf, with increase in the pulsation in the calf, and some diminution in the intensity of pulsation in the dorsalis pedis and the posterior tibial arteries, but absence of a distinct bruit. The circumference of the right calf 12.5 cm. below the bend of the knee was 31.65 cm., of the left 28.75 cm. The foot became moderately pale on elevation but did not become congested in the dependent position.

By the middle of June changes had occurred in the physical signs in the right leg. The pain, tenderness and swelling persisted, but loud systolic and diastolic murmurs had developed, associated with an intense systolic and less intense diastolic thrill, and the pulsations in the calf had greatly increased whereas those in the vessels of the foot had become impalpable. The thrill was most intense in the upper part of the posterior aspect of the calf about 12.5 cm. below the fold of the knee and was transmitted downward almost to the region of the ankle and upward into the popliteal space. The murmurs, which were almost continuous but had a definite diastolic accentuation, were heard with greatest intensity at the point of greatest pulsation and thrill, and were transmitted with progressively diminishing intensity down to the very tips of the toes and upward almost to the middle of the posterior aspect of the thigh. There was some radiation to the lateral and medial aspects of the calf and thigh. The superficial veins were not enlarged and there was little if any difference in the color and the palpable warmth of the two legs. Trophic changes were not apparent. Measurements (circumference) of the lower extremities were:

Right thigh 12.5 cm. above middle of patella	38.75 cm.
Left thigh 12.5 cm. above middle of patella	42.50 cm.
Right leg 12.5 cm. below middle of patella	31.85 cm.
Left leg 12.5 cm. below middle of patella	29.15 cm.

The blood pressure in the arms was 135.30; in the right popliteal fossa it was 180/0, in the left 195/0.

On June 18 an arteriogram of the right lower extremity was made by injecting 10 c.c. of thorotrast into the femoral artery in Scarpa's triangle (fig. 1).[3] This showed the shadow of the popliteal artery to fade out just above its bifurcation. Muscular branches of the femoral and popliteal artery were demonstrated extending downward into the calf far below the popliteal artery. Veins were not demonstrated.

By the middle of July there had developed less pulsation and somewhat less swelling of the right calf, the thrill had disappeared, and the murmurs were much less extensive, stopping above the ankle and just above the popliteal space. There were still no pulsations in the vessels of the foot and no color, temperature or trophic changes.

Ten days before death (September 6) the pain in the right leg recurred, and the temperature became higher, ranging from subnormal to 103.4°F. until the last two days, when it remained between 104° and 105°F. Anuria lasted for 24 hours the day following the return of pain in the leg, the abdomen became distended, dyspnea became severe, the liver was palpable 6 cm. below the costal margin, râles were heard at the bases of the lungs, and the patient became very drowsy. The right foot, especially the toes, became mottled with deep cyanosis and grew cold. Right external strabismus developed. Paralytic ileus appeared. The pain in the leg ceased after 24 hours, and the mottling of the foot disappeared except for one area on the dorsum of the great toe; the foot became a little less cold. One petechia appeared on the right upper eyelid. The hands were cyanotic for three days before death, and the pulse rate ranged between 120 and 128 per minute. Death occurred approximately 7 months after the onset of fever. Disappointingly, permission for necropsy could not be obtained.

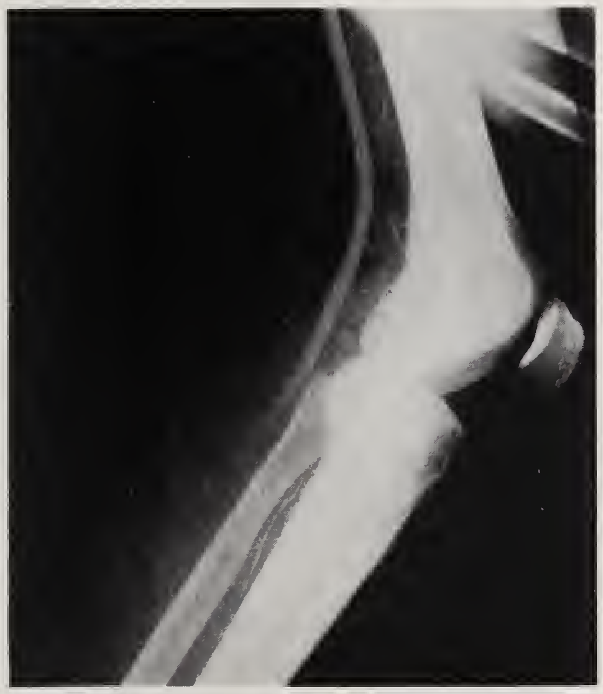

Fig. 1. Arteriogram with thorotrast showing fading out of column of thorotrast at end of popliteal artery but continuation toward foot of collateral vessels.

Although a positive blood culture was not obtained, there is no reasonable doubt that the patient had subacute bacterial endocarditis, probably engrafted on the scarred aortic valve. The prolonged fever, clubbing of the fingers, splenomegaly, and anemia in the case of a patient with known rheumatic heart disease and in the absence of a determinable etiologic factor other than bacterial endocarditis spell only that diagnosis. Embolic phenomena of a definite nature were scarce, but although they are common in cases of bacterial endocarditis they are not infrequently few in number and late in occurrence. The episodes of abdominal pain were probably the result of emboli lodging in some intra-abdominal viscus. The vascular phenomena of the right leg were undoubtedly of embolic origin.

The most likely explanation of the vascular lesion of the right leg was the lodgement of a portion of a bacterial vegetation at the bifurcation of the popliteal artery resulting in ulceration of the wall of the artery and finally perforation into the popliteal vein. The perivascular inflammation affecting the accompanying nerves produced severe pain. The vascular lesion, therefore, was a mycotic arteriovenous fistula. The physical signs were unequivocally those of such a fistula. Simple occlusion or simple aneurysm could not conceivably produce such physical signs as existed.

The collateral circulation was adequate to prevent serious trophic changes. The most difficult thing to explain was the apparent spontaneous closure of the fistula which resulted in disappearance of the physical signs characteristic of arteriovenous fistula. Traumatic or congenital fistulae rarely if ever close. It is possible, however, that the inflammatory process probably surrounding the involved vessels

(*Continued on page 454*)

MEDICAL ANNALS

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EDITORIALS

THE WORLD ON THE MARCH

Events of the past year have been of such staggering proportions that no one can yet evaluate them or their probable effect. In the confusion which has ensued, one fact stands out. At no time in the world's history have vast changes taken place with such startling swiftness. We have hardly recovered from the impact of one crisis before another supplants it. It has never been more true that nothing is as dead as yesterday's news. The press, despite its valiant efforts, has been hard put to keep up with developments. As a result, the radio has assumed a new importance as a medium of disseminating news. Day and night broadcasting stations relate the sad plight of our civilization. Many millions of people have listened anxiously to the unfolding of the most tragic drama of our time.

Who would have believed at the beginning of this year that Europe would be devastated; that in rapid succession Denmark, Norway, Holland, Belgium and France would be ground under the heel of a ruthless conqueror? It would have seemed incredible that a badly battered Britain would be fighting for her existence, and that in our own land there would be vast military preparations for defense. Most unbelievable of all would have been the prediction that our first peacetime draft law would be enacted. But that is the picture as the year comes to a close.

Small wonder that people everywhere are confused and troubled about the future. For it is obvious that no nation, whether or not it becomes involved in the present conflict, can escape unscathed. Dark as the outlook is, there is no reason to abandon hope. On the contrary, these times are a challenge to the courage of free men. As a speaker recently said, forward strides in civilization are usually made in a period of confusion. However, a nation must be strong to take advantage of its opportunities.

What has happened should impress the medical profession with the task before it. This is no time for quibbling, evasion or indifference. If the profession is to live up to its obligations, it must prepare itself for the inevitable difficulties which are ahead. The first step in this direction is to support and make more effective its official medical organizations. Since individual physicians have little influence, only as a group can they be potent.

This brief recital of the events of 1940 may well be concluded with a plea to the medical profession here and elsewhere. Today the world is on the march. Let us prepare ourselves. "It is later than you think."

A REMINDER TO TAXPAYERS

There is one point on which both sides of the controversy in regard to medical care are in agreement: care of the indigent is a responsibility of the community. In many communities this obligation has been recognized and physicians have been compensated at least in part for their services. The fact remains, however, that if all services now being rendered by physicians without compensation were paid for there would be an outcry from the already heavily burdened taxpayers. For the expenditure which would be necessary, even at minimum fees, would be far in excess of what is generally realized. Illustrative of this is the situation in the District of Columbia.

The most accurate record of the free work done by physicians in the District is to be found at the Health Security Administration. Upon request, the Administration supplied the following significant figures for the first nine months of 1940:

Number of clinic passes issued	25,901
Number of visits to hospitals, clinics and health centers on these passes	198,103
Number of arrangements made for admissions and readmissions to hospitals	6,497
Total number of hospital days	70,303

The above figures do not include services rendered indigent patients at Gallinger Hospital or those who go to doctors' offices. Every practitioner has a number of private patients for whom he cares without thought of being paid.

The Medical Society has for a long time cooperated with the social agencies in the District. For example, at the Washington Self-Help Exchange and Goodwill Industries general practitioners have served as medical advisers to those persons entitled to assistance in these institutions. These physicians are known as Medical Guides. Recently an agreement was entered into whereby Medical Guides will examine W.P.A. workers. Further expansion of this program is in progress.

Probably least known is the contribution of physicians who have testified for various departments of the Federal Government. These departments do not have funds to pay physicians and so practitioners called upon by the Medical Society to assist have generously given their time.

At the present moment, the Society is cooperating in the greatest undertaking in recent years, the medical preparedness program. It has made available all of its facilities to the Selective Service System through its Committee on Medical Resources. Among other things, it has provided physicians for local examining, medical advisory, and induction boards. It has also arranged for the examination of men registered for the draft in the various hospitals.

Mention should also be made of the time devoted by various members of the Society to the lay educational program. None of these men receive any compensation but render what they believe a valuable service to the public.

Of course, no one knows the value of all these services. The point is that taxpayers here in the District are more indebted to physicians than they realize. The profession would be embarrassed if too much were made of its contribution to the welfare of this community. But it believes the taxpayers should know that if it were not for the medical profession their burden would greatly increase.

PERTINENT PARAGRAPHS

Society Meetings

The following meetings of the Society's boards, committees and sections were held during November. Informal sessions of officers and committee members, which were more frequent than usual last month, are not included.

November 1	Committee on Public Policy Executive Board
November 4	Committee on Medical Resources
November 7	Section on Neurology and Psychiatry
November 8	Committee on Medical Resources
November 11	House Committee
November 19	Committee on Industrial Medicine
November 25	Advisory Committee to Washington Self-Help Exchange and Goodwill Industries Executive Board
November 26	Subcommittee on Tuberculosis
November 28	Section on Pediatrics
November 29	Board of Censors

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Static from Diathermy Equipment

According to a recent announcement in the *Washington Post*, "Federal Communications Commission engineers . . . will reverse their customary tactics in dealing with radio interference and tackle a known cause of faulty reception with kid gloves." The article states it has been known for several years "that electro-medical apparatus used by the medical profession in the treatment of human ills often causes interference in radio transmission. The interference, moreover, is not restricted to the locality of the diathermy equipment but often travels thousands of miles to do its damage. Realizing that this interference cannot be abruptly eliminated, the F.C.C. has called an informal engineering conference. . . ." The conference was scheduled for November 29.

In a statement to the press, Mr. E. K. Jett of the Commission said:

"The interference caused by diathermy equipment appears in a class of its own. Transmissions from these machines are capable of being received across the continent and even across the ocean. The frequencies upon which they operate are used by the national defense and safety services. Interruption of these services may jeopardize life or property, or seriously affect the Nation's interests."

Mr. Jett emphasized the fact that the medical profession, manufacturers of apparatus and other interested parties were coöperating in an endeavor to find a solution to the problem.

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Joint Action Now Possible

In the June 1940 issue of MEDICAL ANNALS, creation of the Committee on Relations with the Dental and Pharmaceutical Professions was reported. The Committee, which was initiated upon the suggestion of the District of Columbia Pharmaceutical Association, has since been enlarged to include the private nursing group.

Committees to meet with the Medical Society's Committee have just been appointed by the District of Columbia Dental Society and the Graduate Nurses' Association of the District of Columbia. Representing the Dental Society are: Dr. Howard J. Newton, *Chairman*, Drs. C. K. Saunders and J. Louis Humphries. Representatives of the Nurses' Association are: Miss Annabelle Petersen, Miss Edith M. Beattie, Mrs. Ruth Greene Schul and Mrs. Laura Fitzsimmons.

A meeting will be called shortly to consider mutual problems. This should be a significant session, for it will be the first time that the medical, dental, nursing and pharmaceutical professions have been brought together for the purpose of concerted action.

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Communicable Disease Regulations

At a meeting on November 6, the Medical Society approved the recommendation of the Committee on Public Health and the Executive Board that it endorse, with certain changes, Communicable Disease Regulations for the District of Columbia, proposed by Health Officer George C. Ruhland. Subsequently the District Commissioners gave their approval. Copies of the regulations have now been made available to the Society. Before this item appears, each member will have received a copy from the Society's office.

Dr. Ruhland has requested the assistance of the medical profession to make the regulations effective. Officers of the Society urge that members coöperate in every way possible.

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Hearing on Premarital Examination Bill

Those for and against the premarital examination bill were given an opportunity to be heard at a meeting of the special committee, appointed by the District Commissioners, on November 25. The Society's representative on the committee is Dr. Edgar P. Copeland, Chairman of the Committee on Public Policy. Dr. Copeland reported to the committee the action of the Society at its meeting on November 6, when it approved the recommendation of the Executive Board, "That legislation requiring medical examination of parties seeking marriage licenses be endorsed as a desirable publichealth policy."

Dr. George C. Ruhland, District Health Officer, was present at the hearing and responded to many questions in regard to different aspects of the proposed legislation. Representatives of several civic bodies also spoke for the bill. Physicians who made appearances against the bill were Drs. William Hough and John Cavanagh.

As this is written, the Committee has not submitted its recommendations to the District Commissioners.

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Medical Bureau in Operation

After several weeks of preparation, MEDICAL BUREAU, the Society's 24-hour telephone secretarial service, began operation on December 2, with 115 subscribers, 20 of whom have private wires running from their offices to the BUREAU switchboard. The remainder have subscribed to the Alternate Listing Service.

Although the BUREAU'S principal function will be to transmit calls from patients to physicians, it will also serve the public by responding to inquiries for general information regarding medical practitioners, hospitals and other institutions for the care of the sick.

The Medical Bureau Committee is confident that the BUREAU will prove the most valuable agency the Society has sponsored. In the next few weeks the Committee will seek one hundred additional subscribers so that the BUREAU will be entirely self-supporting.

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Medical Students Meet

A notice to members of the Association of Medical Students, New England Region, has been received at the Society's office. It announces that the Fifth Annual Convention of the Association will be held in Boston on December 27, 28 and 29. The theme of the Convention, it is said, will be "Health for Americans," and this is amplified by the following statement:

" 'Health is that state of physical well-being which provides the greatest efficiency for human endeavor. Organized American medicine has only recently recognized its role in the realization of this broader view of health.

" 'In providing for the better distribution of medical care, various agencies—organized medicine, hospitals and social agencies, the lay public and the government—have begun to act together. The full coöperation of all of these is essential for a satisfactory solution of the problem. Now, more than ever before, it is the responsibility of these groups, under the guidance of the medical profession, to maintain and extend health services to the nation. Even in the light of present conditions it must be remembered that the best program for the security of any nation is one that assures a healthy, well-fed, well-housed, well-clothed democratic people. Consequently, it is essential that public health expenditures not be curtailed as they are at present, but actually extended. It is a consideration of these general problems, and particularly of the leading role of the medical profession which is the theme of the A.M.S. convention in 1940.'

"Dr. Henry Sigerist of Johns Hopkins School of Medicine, Miss Lucille McGorky, C.I.O. Health Committee, Mr. Kingsley Roberts of the Coöperative Medical Group in New York as well as other prominent speakers in the field of public health will discuss this theme. . ."

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Naval Medical Center The cornerstone of the new $7,000,000 Naval Medical Center at Bethesda was laid by President Roosevelt on November 11. More than two thousand persons were on hand, despite the inclement weather. Among the invited guests were naval officers, Government officials and representatives of various organizations. The Medical Society of the District of Columbia was represented by its Secretary.

The President, in a brief address, gave further evidence of his interest in matters relating to health. He said:

"This Nation is gaining in foresight. This Nation, thereby, is saving human life in war and in peace.

"This mission today is particularly close to my heart. During the trying days of the World War, when serving as Assistant Secretary of the Navy, I well remember the tremendous load of patients that were cared for under the restricted facilities at the Naval Hospital overlooking Constitution Avenue. . . .

"The need for increased capacity and for better facilities led your Government some years ago to initiate the move from the old historic site to this present one. These new buildings had become a necessity even before the existing expansion in our defense forces. I have referred to foresight and that is one reason that in planning we have provided opportunity for expansion to any point that might become necessary in a national mobilization. . . ."

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Be On the Safe Side On a number of occasions in recent months, physicians have lodged complaints with the Society's office that they have been victims of unscrupulous individuals who have something to sell. One of the commonest rackets in Washington is the sale of tickets for "benefits" which have no merit or are downright dishonest promotional schemes. Several of these have come to the attention of the Secretary, who has promptly investigated and warned inquiring physicians.

Collection agencies whose methods are questionable are also active locally. Physicians should not take a chance with any agency unless they know it is reliable. It is not only important to determine the honesty of those who conduct it, but also to ascertain their fairness in dealing with patients. Finally, no contract should be signed with any agency unless its provisions are understood. In other words, a physician should not put his name to any document whether it appears to be a contract or not without reading all that is printed on it—fine type and all.

Agencies which advertise in the MEDICAL ANNALS were accepted only after careful investigation. They have demonstrated their reliability.

Members of the Society who are approached by persons unknown to them who have something to sell, whether it be some produce or a service, can avoid unnecessary difficulties by calling the Secretary, who will make an immediate investigation.

AID FOR BRITAIN

There has been a generous response to the request of Drs. William J. Mallory and James A. Cahill, Jr., local representatives of the Medical and Surgical Supply Committee of America, for supplies for the sick and wounded in Great Britain. However, more material is needed. Physicians who have drugs or surgical instruments on hand which they wish to contribute, but who have not had time to deliver them to the Society's office, are requested to call the Railway Express Company, National 1210, and inquire for A. D. Satterwhite, F. J. Fanlon, or C. W. Turner, any one of whom will have the supplies taken to the Medical Society Building without charge.

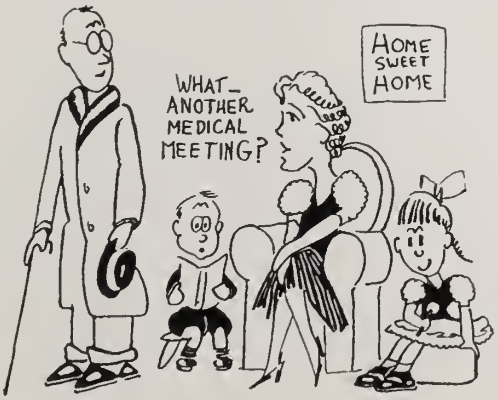
MEETING MANIA

Today, Washington presents a perplexing and trying situation, unparalleled anywhere in the United States so far as medical meetings are concerned. This fact is well known to those of us who have tried to find an open date that does not conflict with some prearranged medical gathering. Some time ago the MEDICAL ANNALS published a list of nights on which the numerous special medical societies of this city meet. Every night in the entire month including some Sundays is taken. The list is amazing. Doctors are really gluttons for punishment.

As if this were not enough, hospitals, to remain on the approved list, are required by the American Medical Association and the American College of Surgeons to hold regular monthly staff conferences. Some hospitals hold them more frequently than this. Doctor's Hospital, the latest addition to our medical institutions, has three staff meetings a month: one general meeting, one for the medical group and one for the surgical staff. Medical luncheons and medical dinners are now the order of the day in addition to the nightly gatherings.

So Washington finds itself literally swamped to the point of saturation with medical meetings. It is not surprising that this situation strikes hard at the doors of the District Medical Society, the rightful center of medical activity in this community. This is the real answer to the lack of a full attendance at our meetings.

What to do about it? In my opinion the time is ripe for action. In suggesting a curtailment of meetings of the various and sundry medical groups, I realize that I am trespassing upon territory well beyond my domain, but it is in a spirit of helpfulness for the good of all concerned that I take up the cause. Because many of the smaller societies have their own traditions with a background of friendship and service it would be unthinkable at this time to ask that they suspend their activities in favor of the District Medical Society. But it is not unreasonable to suggest the desirability of getting together as a group to see if the smaller societies could be amalgamated or their meetings curtailed. The societies which meet once a month might very reasonably reduce their gatherings to every second month or four meetings a year. This necessarily would entail the changing of their constitutions and bylaws and in many cases a sacrifice of personal feelings. However, for the good of all concerned, we have reached the turning of the road where something definite should be done about medical meetings in the Nation's Capital.



Daniel LeRay Borden

MEDICAL PREPAREDNESS NEWS

Upon recommendation of the Medical Society's Committee on Medical Resources, the following appointments to various Selective Service boards have been made:

Board of Appeals:

W. Cabell Moore
James A. Gannon

Induction Board:

Internists	Frank A. Hornaday Caryl Burbank Truman Abbe
General Surgeons	William B. Marbury Fred R. Sanderson
Orthopedic Surgeons	Custis Lee Hall Philip O. Pelland
Ophthalmologists	James N. Greear, Jr. George V. Simpson
Otolaryngologists	Don Johnson Harry F. Davies
Neuropsychiatrists	Andrew B. Evans Albert E. Marland Isaac Silverman Elmer Klein
Clinical Pathologists	Robert A. Keilty Maurice Selinger
Dentists	M. M. Alexander Donald H. Glew

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Arrangements were made by the Committee on Medical Resources for the examination of the first group of conscripted men drawn for service in the District of Columbia at Emergency, Freedmen's, Garfield and Providence Hospitals on November 15. Examining physicians were assigned as follows:

Emergency Hospital:

Linn F. Cooper, *Chief Examiner*
William J. Stanton
Edward W. Nicklas
Bernard L. Hardin, Jr.
Henry R. Schreiber
Worth B. Daniels
William P. Argy
William A. Mess
Fred Repetti
Ferdinand H. Mistretta

Freedmen's Hospital*:

Jesse A. Keene, *Chief Examiner*
Frank H. Trigg
D. McCarthy Harper
Wm. C. Goines
Frank A. Turner
Ulysses B. Martin
Theodore Pinckney
Joseph F. Dyer

Garfield Hospital:

Stuart O. Foster, *Chief Examiner*
Cyrus W. Culver
Chas. W. Harnsberger
John B. Marbury
A. Fife Heath
Henry M. Lowden
Allan Lee
Harry Zehner
Clayton B. Ethridge
Samuel Benjamin

Providence Hospital:

Rush W. Conklin, *Chief Examiner*
Milton H. Prosperi
Edward Y. Davidson
Charles J. Bowne
Robert R. Hottel
Edwin S. Crisp
George I. Eppard
Aaron S. Schwartzman
John H. Elvin

The Chief Examiner of each group developed the procedure best adapted to the institution in which his group was working. They and their co-workers have been highly commended by Selective Service for the efficient manner in which the examinations were conducted.

It appears that in the future, if it is agreeable to Washington hospitals, examinations will be made in these institutions. The community is deeply indebted to the hospitals which made their facilities available in November. Everything possible was done to aid examining physicians.

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* All physicians assigned to this hospital are members of the Medico-Chirurgical Society, Inc., of Washington.

The following members of the Medical Society have been ordered to active duty in the past month and are now in military service: Drs. Robert A. Bier, George Tolstoi and Malcolm D. Harrison. Orders have been received by other physicians; however, so far as is known they have not been definitely assigned.

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Both the Army and Navy Medical Corps are in need of physicians. Practitioners desiring to affiliate themselves with military services should call the Society's office. They will be given information in regard to officials with whom they should get in touch.

MEETINGS

Wednesday, January 8

Program to be furnished by the *Section on Ophthalmology and Otolaryngology*

(Speakers and subjects to be announced)

Wednesday, January 15

"The Psychoneurotic Patient." Edward Hiram Reede, M.D. Discussion will be opened by Harry Stack Sullivan, M.D., Professor of Psychology, Georgetown University School of Medicine

"Some Mental Problems of Aging and Their Management." Winfred Overholser, M.D., Superintendent of St. Elizabeths Hospital and Professor of Psychology, George Washington University School of Medicine. Discussion will be opened by Elmer Klein, M.D.

Wednesday, January 22

"Clinical Aspects of Chronic Headache." F. Dennette Adams, M.D., F.A.C.P., Medical Staff, Massachusetts General Hospital, Boston

(Complete program to be announced)

Wednesday, January 29

"Pulmonary Embolism." Edgar W. Davis, M.D., F.A.C.S., Associate Professor of Clinical Surgery, Georgetown University School of Medicine. Discussion will be opened by Harry F. Dowling, M.D., Clinical Professor of Medicine, George Washington University School of Medicine

"New Treatment and Public Health Concepts in Tuberculosis." Frank Walton Burge, M.D., F.A.C.P., Philadelphia. Discussion will be opened by J. Winthrop Peabody, M.D., F.A.C.P., Professor of Diseases of the Respiratory System, Georgetown University School of Medicine, and A. Barklie Coulter, M.D.

RADIO BROADCASTS

The Committee on Radio Education presented the following broadcasts over Station WMAL during the fall months:

September 10	"Dangers of Being Overweight"
September 17	"Immunization Against Diphtheria"
September 24	"The Gallbladder"
October 1	"The Gallbladder" (cont'd)
October 8	"Oysters as Food"
October 15	"District of Columbia Medical Society's Postgraduate Convention"
October 22	"American Medicine"
October 29	"Thyroid Gland"
November 5	"Contagious Diseases among School Children"
November 12	"Diabetes"
November 19	Open Medical Forum
November 26	"The Doctor's Scotland Yard"
December 3	"The Little Known Glands"
December 10	"Harmful Effects of a Quick Lunch"

Dr. Roy Lyman Sexton, Chairman of the Committee, was assisted in the presentation of the above programs by Drs. Clayton B. Ethridge, Daniel L. Borden, Melvin P. Isaminger, William A. Withers and Mr. Lewis Radcliffe, Director of the Oyster Institute of North America.

NEWS AND PERSONALS

The Second Annual Postgraduate Course in Aviation Medicine and Aviation Ophthalmology will be given by the **George Washington University School of Medicine,** February 3 to 7, 1941. The following program has been announced:

"Physiological Problems Incident to Military and Commercial Flying," Comdr. J. C. Adams, M.D., Medical Corps, U. S. N., Flight Surgeon in charge of Division of Aviation Medicine, Bureau of Medicine and Surgery, Washington, D. C.

"Vision and Accommodation," Lt. Col. R. K. Simpson, M.D., Medical Corps, U. S. A., School of Aviation Medicine, Randolph Field, Texas

"Motility of the Eye," Ernest Sheppard, M.D., Associate Professor of Ophthalmology, George Washington University School of Medicine

"Color Vision and Night Blindness," Lt. Col. R. K. Simpson, M.D., U. S. A.

"Stereopsis and Depth Perception," Major John M. Hargreaves, M.D., Medical Corps, U. S. A., Medical Section, Office Chief of Air Corps, Washington, D. C.

"Fundus of the Eye," G. Victor Simpson, M. D., Assistant Professor of Ophthalmology, George Washington University School of Medicine

"Refraction," E. Leonard Goodman, M.D., Associate in Ophthalmology, George Washington University School of Medicine

"Aniseikonia As It Relates to Aviation," Adelbert Ames, Jr., Ph.D., Research Division, Dartmouth Medical School, Hanover, N. H.

"Otolaryngology in Relation to Aviation," Comdr. J. R. Poppen, M.D., Medical Corps, U. S. N., in charge of Medical Research, Bureau of Aeronautics, Navy Department, Washington, D. C.

"Equilibration," Comdr. J. R. Poppen, M.D., U. S. N.

"The Relation of the Flight Surgeon to the Flying Personnel," Capt. Harry G. Armstrong, M.D., Medical Corps, U. S. A., Toronto, Canada, former Director of Aero-Medical Research Laboratory, Wright Field, Dayton, Ohio

"The General Physical Examination," Lt. Col. David N. W. Grant, M.D., Medical Corps, U. S. A., Chief, Medical Section, Office Chief of Air Corps, Washington, D. C.

"Effect of Altitude in Relation to Military Flying," Capt. Harry G. Armstrong, M.D., U. S. A.

"Interpretations of Neurological Signs in Aviation," Ralph Greene, M.D., Medical Director of Eastern Air Lines, Coral Gables, Fla.

"Cardiovascular System in Relation to Aviation," Capt. Otis O. Benson, Jr., M.D., Medical Corps, U. S. A., Wright Field, Dayton, Ohio

"Psychological Aptitude As Applied to Aviation," Lt. Comdr. Wilbur E. Kellum, M.D., Medical Corps, U. S. N., U. S. Naval Air Station, Pensacola, Fla.

"Physiologic Effects of High Altitude Flying," W. Randolph Lovelace II, M.D., Surgeon, Mayo Clinic, Rochester, Minn.; Consulting Surgeon, Northwest Airlines; Captain and Flight Surgeon, Medical Reserve Corps, U. S. A.

"Electrocardiography in Aviation," Capt. Otis O. Benson, Jr., M.D., U. S. A.

"The Use and Methods of Administration of Oxygen during Flights at High Altitudes," W. Randolph Lovelace II, M.D.

"Fatigue in Aviation," Ross A. McFarland, Ph.D., Assistant Professor, The Fatigue Laboratory, Harvard University; Lieutenant Commander, A-V. (S) U. S. N. R.

"Administration in Commercial Aviation," Walter A. Ostendorf, M.D., Senior Medical Officer, Civil Aeronautics Board, Washington, D. C.

"Airline Medical Problems," Hodges McKnight, M.D., Medical Director of American Air Lines, Fort Worth, Texas

"Structural and Other Disqualifying Defects," William R. Stovall, M.D., Chief, Medical Section, Civil Aeronautics Board, Washington, D. C.

"Recent Methods of Testing Fitness for Flying," Ross A. McFarland, Ph.D.

"The Experiences of an Air Line Pilot," David L. Behncke, President, Air Line Pilots Association, Chicago, Ill.

The Military and Naval authorities have advised the George Washington University School of Medicine that credit will be given to those officers in the Medical Reserve Corps of the U. S. Army and the U. S. Navy who attend the entire series of lectures. Dr. William Thornwall Davis, Professor of Ophthalmology and Executive Officer of the Department of Ophthalmology, in charge of the course, has appointed Drs. Ronald A. Cox, E. Leonard Goodman, Ernest Sheppard, G. Victor Simpson and A. E. Meisenbach, Jr. to give information and assistance to those attending the sessions.

The fee for the course will be $25, $15 payable upon registration and the balance of $10 due at matriculation. Checks should be made payable to the George Washington University School of Medicine and sent to the secretary, Miss Louisa G. Wells, 927 17th Street, N. W.

Films on surgery will be loaned without charge for group showings to medical schools, hospitals and accredited medical and surgical societies. To arrange bookings it is merely necessary to send the title and catalog number of films desired, date of showing, name of organization and address to which shipments should be made. Films are available in 16 millimeter width only and are supplied in black and white. Requests for bookings or for information regarding color films should be addressed to Surgical Film Library, Davis & Geck, Inc., 217 Duffield Street, Brooklyn, N. Y. A catalog of films available for 1940-41 is on file in the Society's office for any members who would like to arrange bookings for medical groups.

The 34th Annual Session of the Southern Medical Association which was held in Louisville, Ky., November 13-15, 1940, was attended by many Society members. The daily bulletins listed the following names among its registrants:

Drs. William M. Ballinger, Joseph B. Bogan, Dexter M. Bullard, Tomas Cajigas, Edgar P. Copeland, Eloise B. Cram, H. N. Dorman, Henry G. Hadley, Julian M. Howe, Oscar B. Hunter, Ann P. Kent, Joseph Kreiselman, Guy W. Leadbetter, Margaret M. Nicholson, Paul S. Putzki, E. Clarence Rice, Ernest Sheppard, F. G. Speidel, W. Calhoun Stirling, Donald Stubbs, Charles S. White, Oscar Wilkinson and Frasier Williams.

Participating in the meeting were Dr. Charles Stanley White, who addressed the Association on "Plasma in Shock," and Drs. White and J. J. Weinstein, who presented a scientific exhibit.

The Speaker's Bureau has been called upon by a number of organizations in recent months. The following is the list of the talks that have been given with the names of the speakers:

September 29, 1940 Baptist Young Peoples' Union
"Animal Experimentation," Dr. Luther H. Snyder
October 30, 1940 Red Cross Class
"Child Management," Dr. Hugh J. Davis
November 4, 1940 Red Cross Class
"Social Diseases," Dr. Darrell C. Crain
November 15, 1940 Red Cross Class
"Cancer—Its Prevention and Control," Dr. Robert J. Coffey
November 27, 1940 Red Cross Class
"It May Be Catching," Dr. David L. Weinstein

Columbia Hospital Clinic has inaugurated a "Class for Prospective Fathers." To date, the following members of the Society have given talks before this group:

October 23, 1940 "A Baby Is Expected," Dr. Jerome F. Crowley
November 13, 1940 "Maternal Welfare," Dr. Bernard Notes

The Section on Gastroenterology met at the home of Dr. Roy Lyman Sexton on December 2. Papers on "Gastrointestinal Allergy" were read by Dr. Leslie N. Gay of the Department of Allergy, Johns Hopkins Hospital, and Dr. T. Nelson Carey, Associate Professor of Medicine, University of Maryland.

The Section on Pediatrics presented the following scientific program, November 28: "Coagulation Defects in Infancy and the Treatment with Vitamin K," Dr. Arthur M. Grossman, Chief Resident Physician, Children's Hospital.

The Section on Neurology and Psychiatry held its regular meeting December 5. Papers were delivered on the following topics: "Concerning the Anatomy and Function of the Ventral Accessory Abducens Nucleus of Van Gehuchten," Dr. Wendell Muncie, Associate Professor of Psychiatry, Johns Hopkins University; "Electro-Shock in the treatment of Functional Mental Diseases," Drs. David J. Impastato and Renato Almansi of New York City.

The Jacobi Society will meet December 16 at the Ambassador Hotel. Dr. Myer J. Herschman will discuss "Experiences with Gastrointestinal-Renal Problems" at this meeting. Dr. Isadore Lattman will address the Society January 20 on the subject, "Salpingohysterography."

Papers read at the November meeting were as follows: "Stilbestrol—A New Synthetic Estrogen," Dr. Harry S. Douglas; "Deafness," Dr. Joel N. Novick.

The Washington-Baltimore Psychoanalytic Society has scheduled the following meetings for December and January: Dr. Joseph O. Chassell, Bennington, Vt., will read a paper on "The Role of the Psychoanalyst on the College Faculty," December 14 at the Shoreham Hotel. Dr. Felix Deutsch, Associate Professor of Clinical Psychosomatic Medicine, Washington University School of Medicine, St. Louis, will be the speaker January 11 at the Hotel Belvedere, Baltimore. The title of his paper will be "Personality Traits in Allergic and Related Skin Conditions." This will be an open meeting and dermatologists and others interested in this subject are invited to attend.

The Hippocrates-Galen Society held its December meeting at the home of Dr. George K. Nutting. Dr. B. W. Leonard addressed the society on "Masked Hyperthyroidism in Cardiac Disturbances." Dr. G. Louis Weller, Jr. gave the case report on "Nervous System Involvement (Including Amblyopia) in Food Poisoning."

The Syphilis Journal Club met November 29 at the home of Dr. Theodore C. C. Fong. Means of preventing members of the military forces from contracting venereal diseases were discussed, with Dr. R. A. Vonderlehr presiding.

The Club will meet next at the home of Dr. Ernest Sheppard, 4931 Brandywine Street, N. W., on January 31, 1941. A general review of congenital syphilis will be the topic for discussion.

The Washington Society of Pathologists met December 7, at which time the following papers were presented: "Tumor from the Omentum," Dr. Oscar B. Hunter; "Brain Tumor," Dr. Walter Freeman; "Hepatic Tumors of Rats Induced by Dimethylaminoazobenzol," Dr. J. E. Edwards, Cancer Research Institute, Bethesda, Md.; "Brain Tumor," Drs. George Fultz and Daniel Jaffe, George Washington University School of Medicine.

The Smith-Reed-Russell lecturer for December 12 was Dr. John A. Kolmer, Professor of Medicine, Temple University School of Medicine, Philadelphia, who spoke on "The Role of Spirochaeta Pallida in Relation to the Wassermann Reaction."

Children's Hospital celebrated the 70th anniversary of its founding and the 20th anniversary of the superintendency of Miss Mattie M. Gibson at its annual meeting, December 2. Tribute was paid to Miss Gibson by Charles D. Drayton, President, and by Thomas Bell Sweeney, First Vice President of the Board of Directors, for the remarkable growth of the institution since she became superintendent. In 1919, the year before Miss Gibson took charge, there were less than 1,500 patients treated in the Hospital and less than 5,000 children brought into the dispensary. This year there were over 7,500 bed patients and more than 64,000 treated in the dispensary.

Dr. Loren B. T. Johnson and **Dr. Joseph S. Wall** were reëlected to the Board of Directors of the Hospital.

George Washington University Hospital has announced the appointment of two resident physicians: Dr. Robert E. Coker, Jr. of Chapel Hill, N. C., and Dr. Eugene Willard of Schenectady, N. Y.

Gallinger Hospital acquired a new Drinker-Collins respirator on November 22. It was presented by the local chapter of the National Foundation for Infantile Paralysis. The "iron lung" was purchased with proceeds from the President's Birthday Ball last January at a cost of $2,450.

The District of Columbia Tuberculosis Association held its annual meeting at the Y. W. C. A. Barker Hall on November 20. The theme of the meeting was "Total Defense." Dr. Esmond R. Long, Director of the Henry Phipps Institute of Philadelphia, spoke on "Chest X-Ray Examination in National Defense." Dr. J. Winthrop Peabody, President of the local association, pointed out in his annual report that the tuberculosis death rate in the District is now lower than ever before, and that "our ultimate goal of eradication of tuberculosis is slowly, but surely, being reached."

Dr. Henry J. Crosson was elected member of the Board of Directors while **Drs. James A. Murphy** and **James G. Cumming** were reëlected to the Board. **Dr. J. Winthrop Peabody,** President, and **Dr. L. H. Reichelderfer,** Vice President, were reëlected to their respective offices for the coming year.

The United States Public Health Service has set up a **National Advisory Committee on Gerontology** to study problems dealing with the aging population. The Committee concluded its first series of meetings November 26 at the National Institute of Health.

Dr. Alfred H. Richwine was named Chairman of the Public Health Committee of the Sixteenth Street Highlands Citizens' Association on November 20.

Dr. Oscar B. Hunter was elected President of the Washington Kiwanis Club, November 28. Dr. Hunter expects to expand the program of aid to crippled children during 1941.

Dr. Hugh S. Cumming, Director of the Pan-American Sanitary Bureau, was elected President of the Gorgas Memorial Institute on November 19 at its annual meeting in the Pan American Union Building.

Dr. Jacob Kotz discussed "Marital Relations" November 20 at the Second Institute on Marriage sponsored by the Jewish Community Center.

Dr. George Tolstoi, an officer in the Army Medical Reserve Corps, has been ordered to Fort Monroe, Virginia.

Dr. Roy Lyman Sexton showed a moving picture film entitled "A Colored Diary of Europe" at the monthly meeting of the Woman's Auxiliary to the Medical Society on December 11.

Dr. William DeKleine participated in the program of the Third Annual National Defense Night sponsored by the Philadelphia County Medical Society, November 13. He spoke on "Red Cross Participation in Medical Defense."

Dr. Eugene W. Higgins will serve as Chairman of the Health and Sanitation Committee of the American University Park Citizens' Association for the ensuing year.

Waverly Press, Inc., publishers of the MEDICAL ANNALS since its inception, is commemorating the fiftieth anniversary of its founding by the publication of an illustrated booklet entitled, "Golden Anniversary 1890–1940," which tells the interesting story of the founding of the company and its growth. From 1907 there has been a gradual transition from general printing to the publication of scientific material, for which the company is so well known. Today more than 75 scientific periodicals are printed by the Waverly Press.

The Society is indebted to the **Surgeon General of the Army** for another volume of the Index Catalogue of the Library of the Surgeon-General's Office, Volume V, E–F, fourth series. The library now has on file amost a complete set of the Index, which is available for the use of members.

Reports have been received from physicians that they have been victimized by a man who makes signs. In one instance at least payment was obtained in advance and no sign was delivered. It is suggested that physicians who are approached by anyone having signs for sale call the Society's office to ascertain if the individual is reliable.

BOOK REVIEW

The Poison Trail. William F. Boos, M.D. Pp. 380. Price, cloth, $3.00. Boston: Hale, Cushman & Flint, 1939.

In this engrossing book, the famous toxicologist tells of some of the strides made by man in dealing with his ever-present enemy, poison.

Dr. Boos as a boy in Lorraine became interested in the poison realm when he learned about the danger of snake venom. His father, a Boston businessman, was keenly interested in chemistry and directed his son's attention to this science. In 1890 William Boos entered Harvard and managed to study, during his four years there, every available course in chemistry. After graduating from Harvard, he spent two years at the University of Heidelberg under the tutelage of Victor Meyer. He later returned to Harvard as an instructor in chemistry. By this time he had become especially interested in physiological chemistry, so that he gave up his instructorship at the end of a year and entered the Harvard Medical School. Here, while still a student, he began research on the analysis of poisons. With the aid of the Parker Traveling Fellowship of Harvard, he studied at the Pharmacological Institute of the University of Strasbourg. From here, he was asked to return to Boston in order to start research for the Massachusetts Department of Health. He has testified in poison cases all over the United States, particularly with violations of the Pure Food and Drug Act.

This well-trained scientist writes with keen enthusiasm of the ills and disasters caused by poisons. The inclusion of anecdotes and case reports makes his story lively and completely engrossing. The reader follows avidly the tale of the common problems caused by poisoning from food; the part played by the expert witness in legal cases; the ways and methods of the poison murderer; vocational and industrial poisoning; the action of morphine, monoxide and arsenic; the perils of the drug habit, alcoholism and the like.

The style is, in general, intimate and conversational. Some parts of the book read like a mystery thriller, while other parts contain good explanations of the chemical actions of poisons.

The appendix contains detailed toxicologic reports on a food poisoning claim, an industrial claim, and a capital crime. The entire book is enlightening and enjoyable and can be recommended for both the professional man and the lay reader.

H. H. H.

JAMES STUART, M.D.
(1865–1940)

Dr. James Stuart, a Life Member of the Medical Society of the District of Columbia, died at his home, 5812 Thirty-second Street, N.W., on October 18, 1940.

Dr. Stuart, who had practiced in Washington for nearly a half century, was widely known and beloved by the people of the community as a family doctor of the old school. He was born in Batesburg, South Carolina on May 28, 1865, and graduated from Columbian Medical College, now George Washington University, in 1892. Subsequently he served internships at Children's and Emergency Hospitals. For a number of years Dr. Stuart was on the staff of Lutheran Infirmary.

Dr. Stuart was a member of National Lodge No. 12, F. A. A. M.

Surviving are his widow, Mrs. Marjorie Elizabeth Stuart, and two daughters, Dr. Marjorie Shaw Stuart and Mrs. Charles D. Allen, both of Washington.

JAMES THRUSTON WOLFE, M.D.
(1881–1940)

Dr. James Thruston Wolfe, an Active Member of the Medical Society of the District of Columbia, died at his home, 4724 Seventeenth Street, N.W., on December 7, 1940.

Dr. Wolfe was born in Front Royal, Virginia on July 1, 1881. He attended the George Washington University School of Medicine, from which he graduated in 1908. Following his graduation, he served his internship at Providence Hospital. He began practice in Washington immediately thereafter and was active for more than a third of a century.

Surviving are his wife, Mrs. Elizabeth Young Wolfe; a sister, Selina Wolfe, and a brother, Scott A. Wolfe.

(Continued from page 425)

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(Continued from page 441)

resulted in closure. This was accomplished apparently without thrombosis of the vein, since there was never any edema of the leg.

The arteriogram indicates that the main stream of blood either stopped in the lower portion of the popliteal artery or passed from the artery into the vein. The physical signs were typically those of an arteriovenous fistula and not of either an obstruction or an aneurysm. A small fistula could give exactly these physical signs, and according to the experience of one of us[4] it could also produce the arteriographic appearance obtained.

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INDEX

They come and go—
    Presidents, past presidents, chairmen of committees;
We note their acts on one page—
    Where they speak, what they write, honors they receive,
Then a few pages on, record their death—
    This they did and that, were members of—a long imposing
        list, and now we tribute pay—
Life's drama in the index of a journal.

A. Louise Eckburg

MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA

VOLUME IX, 1940

INDEX

Scientific Articles

Albuminuria, cases presenting, general principles of laboratory procedure in, (Ragle) 277

Alcoholic Hallucinosis, acute, delirium tremens and, treatment of, (Silverman) 291

Alcoholism and heart, (Yater and Wallace) 54

Alcoholism, treatment of, a psychoneurosis, (Strecker) ab-170

Aneurysm of iliac artery, spontaneous rupture of, successfully treated surgically, (Yater and Sugar) 237

Aneurysms, peripheral, surgical repair of, value of sympathetic interruption, (Veal) 227

Appendicitis with perforation, management of, newer and safer technic in, (Cafritz) 197

Arteriovenous Fistula, mycotic, (Yater, Luckett and Leonard) 439

Cardiovascular-Renal Diseases, importance of, (Shepherd) 371

Cholecystitis, acute, management of, (Cahill) 127

Coronary Artery Disease, patient with, diagnostic study of, (Weller) 13

Dermatitis from a sanitary belt, (Sandler) 53

Diabetic Camp for children, third annual report of, (Mish, Benjamin, Manchester, Rice and Hulbert) 212

Drug Regulations, new, (Campbell) 204

Enteritis, regional, (Coffey) 109

Fractures, intracapsular, of neck of femur, healing of, (Elward and Rudner) 205

French Surgery, early, progress and personalities in, (Lyons) 189

Gastrointestinal Diseases, nervous and mental components of, (Lewis) 42

Gonorrheal Vulvovaginitis, estrogen treatment of, failures and recurrences following, (Notes) 346

Granuloma resulting from penetration of talcum powder, (de Savitsch) 169

Hearing Tests in infancy and early childhood, (Wells) 8

Heart Disease, importance of, (Ylvisaker) 383

Heart Wounds, diagnosis and treatment of, (Bigger) 390

Hemorrhagic Adnexal Lesions producing "Acute Abdomen" with intraperitoneal hemorrhage, (Cromer) 48

Hypertension, diagnosis and treatment of, fads and fallacies in, (Yater) 300

Hypertensive Heart Disease in white and colored women, (Dunn) 271

Hypertensive-Vascular Disease, renal involvement in, (Weiss) 413

Inclusion Blennorrhea in pediatric practice, (Giddens and Howard) 333

Intestinal Obstruction, roentgenography in diagnosis and localization of, value of, (Cove and Silverman) 348

Labor, third stage of, use of intravenous basergin in, (Davin and Morris) 1

Ménière's Syndrome—treatment with histamine, (Ingham) 241

Meningitis, treatment of, due to hemophilus influenzae (Pfeiffer bacillus), (Lindsay, Rice and Selinger) ab-134

Mentally Ill, commitment of, new law for, (Cohen) 167

Ophthalmia Neonatorum in the District of Columbia, (D. C. Society for Prevention of Blindness) ab-74

Otorrhea, chronic, (Novick) 267

Peptic Ulcer, perforated, (Cox) 202

Pericarditis, various forms of, recognition and treatment of, (Bloedorn) 422

Perineal Pain following episiotomy, prolonged relief of, (Sheffery) 231

Pneumococcal Peritonitis, treatment of, with sulfonamide drugs and serum, (Sager) 81

Poliomyelitis, anterior, rest and protection treatment of, (Cobey) 275

Prenatal Care, (Kane) 342

Pressures, methods for measurement of, in antecubital and popliteal veins during exercise, (Veal and Hussey) 71

Psychiatry and criminal law, (Curran) 130

Serologic Laboratories, private, evaluation of, by municipal or state agencies, (Hazen) 234

Staphylococcal Septicemia treated with staphylococcal antitoxin, (Sager, Hunter and Tolstoi) 306

Staphylococcal Septicemia, treatment of, with sulfamethylthiazol, (Keliher and Carlen) 78

"Stiff Neck," traction-manipulation treatment of, (Neviaser) 75

Stokes, William, of Dublin, case reports by, (Daniels) 395

Subvitaminosis C, diagnosis of, by determination of ascorbic acid blood level, (Kassan and Roe) ab-134

Sulfanilamide therapy with special reference to ear infections, (Lindsay, Rice and Selinger) 115

Sulfapyridine—is it a safe drug?, (Klumpp and Weilerstein) 83

Sulfapyridine—its nature and some theories of its action, (Roth) 153

Sulfathiazole in pneumonia, clinical use of, (Abernethy) 159

Syphilis, immunity in, practical considerations of, (Kemp) 37

Thrombophlebitis, superficial, venous ligation in treatment of, (Hollingsworth) 304

Tobacco, history of, (Hadley) 298

Tuberculosis, laryngeal, diagnosis and treatment of, (Looper) 120

Tuberculosis, pulmonary, diagnosis and treatment of, some remarks on, (Hayes) 261

Urinary Bladder, spontaneous rupture of, (Kiernan) 18

Urinary Tract, bleeding from, significance of, (Stirling) 434

"Vascular Headache"—treatment with histamine, (Yater) 165

Vitamin C—review of our present knowledge, (Kassan and Roe) 426

GENERAL

- **Abbott Laboratories,** fellowships, 223
- **American Red Cross,** 99, 217, 286, 322
- **Anti-Trust Indictment:**
  - Court of Appeals Reverses Decision, 136
  - Our Case: Where Does It Stand?, (Baker) 26
  - pertinent paragraphs, 62, 248, 355
  - Supreme Court Denies Certiorari, 215
- **Army Medical Library,** 411, 453
- **Book Reviews,** 69, 107, 290, 366, 367, 453
- **Books Received,** 152, 225, 259, 290, 366, 453
- **Cancer Control Program:** 136, 247, 356; Cancer Control: Early Is the Word, (Little) 97
- **Correspondence,** 184, 330
- **Editorials, miscellaneous:**
  - **Scientific:**
    - Aviation Medicine and Ophthalmology, 89
    - War on Appendicitis, 59
  - **General:**
    - All Eyes Are on Washington, 323
    - Are Americans Getting Soft?, 279
    - A Reminder to Taxpayers, 443
    - Change Comes to State Medical Journals, 90
    - Have We Lost Confidence?, 354
    - Mail That Is Never Read, 60
    - 1940?, 22
    - Our Duty, 171
    - Professional Groups Join Forces, 216
    - Public Opinion and the Physician, 135
    - Serving on a Committee, 59
    - Steady Growth, 91
    - The Road Ahead, 214
    - What Is Your Membership Worth?, 280
    - When Individualism Fails, 23
    - Who Are the Young Physicians?, 325
    - The World on the March, 442
- **Health Security Administration:** 93, 106, 356, 443; How It Functions, (Garrett) 220
- **Hospitals:**
  - Calendar of meetings, 260
  - Chicago Lying-in, 181
  - Children's, 34, 152, 184, 225, 452
  - Columbia, 330
  - District Training School, hospital unit, 224
  - Doctors', 67, 149, 183, 225
  - Emergency, 224
  - Fauquier County, 224
  - Freedmen's, 258
  - Gallinger, 106, 224, 288, 452
  - Garfield, 258
  - Georgetown, 183
  - George Washington University, 452
  - Glenn Dale Sanatorium, 150
  - National Homeopathic, 258
  - Providence, 33, 106
  - Saint Elizabeths, 258
  - Sibley, 106, 330
  - Washington Home for Incurables, 32, 181
  - Woman's Clinic, 183
- **Kober Foundation Lecture:** 151; Kober Lecturer Chosen, 281
- **Long** commemorative stamp, 150
- **Medical Bureau,** 137, 175, 219, 248, 328, 361, 403, 445
- **Medical Schools:**
  - Georgetown University, 180, 281, 330, 364
  - George Washington University, 32, 66, 68, 90, 103, 104, 151, 183, 184, 257, 330, 364, 365, 449
  - Howard University, 288
  - University of Chicago, 181
- **Medical Society of the District of Columbia:**
  - Annual Business meeting: 149; Executive Board Chairman's report, 177; proceedings, 176; Secretary's report, 177
  - Annual Scientific Assembly: 245, 309-322, 323, 327, 328; 1940 Assembly Acclaimed; Record Registration, 409; Now That the Assembly Is Over, 402; pertinent paragraphs, 62, 63, 139, 175, 176, 218; Your Committee Presents, 309
  - Classification of physicians, 63
  - Committees: personnel, 369, 370; schedule of meetings, 23, 61, 91, 138 173, 217, 246, 281, 326, 354, 403, 443; advisory to Washington Self-Help Exchange and Goodwill Industries, 356; arrangements, Annual Scientific Assembly, 63, 218, 402; automobile accidents, 223; cancer control, 247, 257; child welfare, 34, 183; communicable diseases, 34; entertainment, 63, 150; executive board, 34, 64, 92, 93, 140, 175, 177, 218, 244, 247, 281, 283, 327, 355, 356, 359, 361, 404, 444; grievance, 93; industrial medicine, 93; maternal welfare, 24; medical bureau, 150, 219, 223, 248, 328, 361, 445; medical economics, 140, 248; medical resources, 244, 282, 326, 353, 359, 406, 407, 448; membership, 176; music and sports, 150, 248; obituary, 174, 223; obstetrical board, 65; postgraduate education, 62, course on syphilology, 33, 61, 139; public health, 64, 218, 444; public policy, 25, 64, 93, 219, 355, 404, 445; public relations, 92; radio education, 100, 255, 328, 449; relations with dental and pharmaceutical professions, 174, 216, 223, 444; relations with the legal profession, 216, 223; sanitation, 219; venereal diseases, 151
  - Constitution and By-laws, 175
  - Delegates: American Medical Association, 255; Federation of Citizens' Associations, 34; Joint Civil Service Committee, D. C. Chapter, American Institute of Chemists, 223; Washington Council of Social Agencies, 152
  - Golf Tournament, 248, 357
  - Group Hospitalization for members, 25, 63, 282, 356; Group Hospitalization Benefits, (Henryson) 285
  - Library reconditioned, 245, 328
  - Medical Preparedness News: 282, 326, 359, 404, 406, 448; Army Experience for Physicians, 179; list of examining physicians, 359; list of alternate examining physicians, 406; Medical Advisory Committee, 406; Medical Preparedness for National Defense, (McIntire) 407; Organizing Medical Resources, 243; The Profession on Duty, 353; Selective Service board appointments, 448
  - Membership, changes in, 31, 101, 148, 180, 410
  - Minimum Wage Board, D. C., 178
  - Monthly Bulletins, 218

Necrology, 35, 36, 108, 185, 289, 331, 368, 453
Officers: nominated, 148; elected, 178
Pertinent Paragraphs, 23, 61, 91, 138, 173, 217, 246, 281, 326, 354, 403, 443
President: address, 101, 148, 189; biography, 244; President's Page, 249, 284, 329, 358, 405, 447
Programs, 31, 65, 101, 149, 311–318, 328, 363, 410, 449
Radio Broadcasts, 100, 255, 328, 449
Sections:
  gastroenterology, 31, 150, 182, 364, 451
  neurology and psychiatry, 105, 150, 182, 364, 411, 451
  ophthalmology and otolaryngology, 67, 104, 150, 182, 364, 449
  pathology and laboratory medicine, 65
  pediatrics, 24, 67, 104, 411, 451
Speakers' Bureau, 34, 62, 66, 104, 136, 182, 257, 330, 451; On Addressing the Public, 215
Tennis Tournament, 248, 357, 411
Woman's Auxiliary, 34, 106, 176, 321, 365; The Auxiliary Lends a Hand, 245

Medical Societies:
General:
  American Academy of Dermatology and Syphilology, 411
  American Academy of Ophthalmology and Otolaryngology, 287
  American Academy of Pediatrics, 103
  American Association for the Study of Goiter, 66, 149
  American Association for Study of Neoplastic Diseases, 330
  American Association of Industrial Physicians and Surgeons, 149, 364
  American Association of Obstetricians, Gynecologists and Abdominal Surgeons, 102
  American Board of Internal Medicine, 102
  American Board of Obstetrics and Gynecology, 363
  American Board of Ophthalmology, 287
  American College of Physicians, 102, 149
  American College of Radiology, 149
  American Industrial Hygiene Association, 149
  American Medical Association: 62, 136, 139, 149, 215, 246, 255, 256; Committee on Medical Preparedness, 243, 255, 282, 326, 353, 360; Congress on Industrial Health, 32; death of Dr. Hayden, 283; "Doctors at Work," 363; Secretaries' Conference, 355; Woman's Auxiliary, 105, 182, 365
  American Psychiatric Association, 411
  American Public Health Association, 288
  American Society for the Control of Cancer, 257
  Association of Medical Students, New England Region, 445
  Baltimore City Medical, 363
  Baltimore College of Dental Surgery, 106
  Conference of State and Provincial Health Authorities of North America, 223
  Eighth American Scientific Congress, 101, 140, 225
  Harris County (Texas) Medical, 62, 137, 215
  Medical & Surgical Supply Committee of America, 411, 446
  Memphis and Shelby County (Tenn.), 366
  Mississippi Valley Medical, 32
  Montgomery County Medical, 65
  National Gastroenterological Association, 181
  New Jersey Medical, 69
  New York Academy of Medicine, 288
  North Carolina Medical, 140
  Southern Medical Association, 364, 450
  United States Navy Department, Bureau of Medicine and Surgery, 256
  United States Pharmacopoeial Convention, 102, 225
  Virginia State Medical Association, 220
  West Virginia State Medical Association, 220
Local:
  Officers, 70
  Dental, 152, 183, 255, 359, 406, 444
  District Tuberculosis Association, 101
  George Martin Kober Medical, 68
  Georgetown Clinical, 33, 151
  Georgetown University Medical Alumni Club, 258
  George Washington University, 33, 105, 183, 224
  Graduate Nurses Association, 360, 444
  Hippocrates-Galen, 365, 451
  Instructive Visiting Nurse, 181
  Jacobi, 68, 105, 151, 224, 365, 412, 451
  Louis Mackall Medical, 365
  Medico-Chirurgical, Inc., 359, 406
  Pan American Medical Association, 151, 184
  Pharmaceutical Association, 224, 444
  Residents' Journal Club of Children's Hospital, 34
  Saint Elizabeths Hospital, 68, 105, 184, 365, 412
  Smith-Reed-Russell, 34, 69, 152, 412, 452
  Syphilis Journal Club, 68, 105, 330, 451
  Washington Academy of Surgery, 62, 68, 105, 183, 215
  Washington-Baltimore Psychoanalytic, 68, 151, 451
  Washington Clinical Club, 365
  Washington Gynecological, 33, 67, 288
  Washington Heart Association, 65, 101
  Washington Medical and Surgical, 68, 105, 151, 223
  Washington Ophthalmological, 33, 105, 151, 411
  Washington Society of Pathologists, 67, 105, 151, 451
  William Alanson White Psychiatric, 151
  Women's Field Army, 136, 356
  Women's Medical, 68
Medicine, articles relating to, 24, 139, 219, 403, 444
Mutual Health Service: 135; Disappointing Outcome, 173; Suspends Operation, 140
National Health Legislation:
  Hospital Bill Reported to Senate, 171
  Medical Aid for the Needy, (Taft) 250
  pertinent paragraphs, 138, 139, 217
  President's Hospital Plan, 88
  The President Speaks His Mind, 401
  Republican Committee Proposes Health Program, 94
  Senator Lodge's Comments on His Health Insurance Bill, 145
  Wagner Hospital Bill, 139
National Institute of Health, dedication, 401
Naval Medical Center, laying of cornerstone, 446
Osler Memorial building, dedication of, 181
Poetry, 226, 454

Public Health:
  Child Health Day, 182
  Commission on Licensure, 25, 176, 283
  communicable disease code, 218, 444
  educational qualifications of health officers, 98
  handicapped children's register, 172
  licensing of rest homes, 219
  National Advisory Committee on Gerontology, 452
  premarital examination law for District of Columbia, 355, 361, 404, 445
  reorganization of District Health Department, 64, 92, 174
  venereal disease control, 68, 287, 324
  Virginia's marriage examination law, 326
  W. P. A. Health Institute, 62, 66, 257
Reprints Received, 35, 108, 259
Salmon Memorial Lectures, 364
Surgical Film Library, 450
War Relief, 100, 217, 360, 446
Wyeth, John & Brother, paintings available, 322

AUTHOR INDEX

(ab) Indicates abstracts. No prefix indicates article published in full in Medical Annals of the District of Columbia

Abernethy, T. J., 159
Baker, C. S., 26
Benjamin, S., 212
Bigger, I. A., 390
Bloedorn, W. A., 422
Cafritz, E. A., 197
Cahill, J. A., Jr., 127
Campbell, C. B., 204
Carlen, S. A., 78
Cobey, M. C., 275
Coffey, R. J., 109
Cohen, R. S., 167
Cove, A. M., 348
Cox, O. C., 202
Cromer, J. K., 48
Curran, E. M., 130
Daniels, W. B., 395
Davin, E. J., 1
de Savitsch, E., 169
Dunn, T. B., 271
Elward, J. F., 205
Garrett, R., 220
Giddens, S. W., 333
Hadley, H. G., 298
Hayes, J. N., 261
Hazen, H. H., 234
Henryson, E. J., 285
Hollingsworth, R. K., 304
Howard, W. A., 333
Hulbert, L., 212
Hunter, O. B., 306
Hussey, H. H., 71
Ingham, D. W., 241
Kane, H. F., 342
Kassan, R. J., ab-134, 426
Keliher, T. F., 78
Kemp, J. E., 37
Kiernan, P. C., 18
Klumpp, T. G., 83
Leonard, B. W., 439
Lewis, N. D. C., 42
Lindsay, J. W., 115, ab-134
Looper, E. A., 120, 184
Luckett, W. F., 439
Lyons, J. H., 189
Manchester, B., 212
McIntire, R. T., 407
Mish, K. H., 212
Morris, T. N., 1
Neviaser, J. S., 75
Notes, B., 346
Novick, J. N., 267
Ragle, H. E., 277
Rice, E. C., 115, ab-134, 212
Roe, J. H., ab-134, 426
Roth, G. B., 153
Rudner, N., 205
Sager, W. W., 81, 306
Sandler, I. L., 53
Selinger, M. A., 115, ab-134
Sheffery, J. B., 231
Shepherd, P., 371
Silverman, I. J., 291
Silverman, M., 348
Stirling, W. C., 434
Strecker, E. A., ab-170
Sugar, S. J., 237
Tolstoi, G., 306
Veal, J. R., 71, 227
Wallace, J., 54
Weilerstein, R. W., 83
Weiss, E., 413
Weller, G. L., Jr., 13
Wells, W. A., 8
Yater, W. M., 54, 165, 237, 300, 439
Ylvisaker, L. S., 383

PERSONAL NAMES

Abbe, T., 182, 448
Abernethy, T. J., 66, 106, 181
Anderson, H. F., 365
April, E., 258
Argy, W. P., 152, 359, 448
Ballinger, W. M., 106, 357, 364, 365
Barr, E. O., 357
Battle, L. J., 108
Bauersfeld, E. H., 357
Beard, W. H., 106
Belt, N., 106, 357, 365
Benjamin, S., 149, 359, 448
Bennett, A. B., 93
Bernton, H. S., 365
Bier, R. A., 67, 183, 449
Blajwas, A., 69
Bloedorn, W. A., 365
Bloise, F. I., 288
Bockoven, S., 257
Bolton, R. M., 175
Borden, D. L., 184, 244, 249, 282, 284, 329, 355, 358, 405, 447, 449
Bowen, W. S., 259
Bowne, C. J., 406, 448
Braden, F. W., 406
Branham, S. E., 225
Briggs, C. D., 183
Brown, G. T., 412
Brown, R., 67
Burbank, C., 448
Burdick, W. F., 35, 330
Burka, I., 69, 152
Cafritz, E. A., 258
Cahill, J. A., Jr., 411, 446
Cajigas, T., 225
Campbell, C. B., 34, 93, 182
Carr, E. B., 360
Caulfield, P. A., 182
Cavanagh, J. R., 66, 183, 445
Chase, M., 69, 183
Chickering E. E., 152, 178
Chinn, A. B., 181
Christie, A. C., 93, 97, 106, 258
Clements, L. J., 152, 186
Coakley, C. S., 365
Coale, E. S., 224
Coffey, R. J., 257, 451
Cohen, A. M., 183, 364
Collins, J. L., 256
Colvin, H. L., 152
Conklin, C. B., 35
Conklin, R. W., 359, 448
Connolly, A. J. B., 149
Constantinople, P. S., 182, 365
Cooper, L. F., 32, 149, 181, 359, 448
Copeland, E. P., 356, 445
Costenbader, F. D., 67
Coulter, A. B., 35
Cox, R. A., 67, 450
Crain, D. C., Jr., 104, 184, 328, 330, 366, 451
Creswell, G. W., 34, 68, 330
Creveling, C. R., 106
Crisp, E. S., 359, 448
Crosson, H. J., 452
Crowley, J. F., 104, 451
Culver, C. W., 359, 448
Cumming, H. S., 452
Cumming, J. G., 104, 452
Cummings, E. J., 182, 364
Cusack, W. J., 259
Daniels, W. B., 406, 448
Dardinski, V. J., 183
Darner, H. L., 184
Davidson, E. Y., 289, 359, 448
Davies, H. F., 448
Davis, E. W., 364
Davis, H. J., 411, 451
Davis, W. T., 106, 225, 366, 406, 450
Dawson, A. R., 107
Dean, B. F., Jr., 357
Degnan, P. A., 357
DeKleine, W., 35, 225, 258, 452
Dessoff, J., 67, 152, 224, 365
Dessoff, S., 69
Diamond, H. H., 258
Dickens, P. F., 225
Diener, S., 366
Dodek, S. M., 67
Douglas, H. S., 69, 183
Dowling, H. F., 66, 149, 152
Dowling, T., 32
Dunham, E. C., 256
Dunne, F. W., 364
Ecker, L. C., 224, 406
Eichenlaub, F. J., 256
Eisenberg, H., 69
Eldridge, W. W., 183
Elvin, J. H., 406, 448
Elward, J. F., 149, 182
Engh, O. A., 365
Eppard, G. I., 406, 448
Ethridge, C. B., 406, 448, 449
Evans, A. B., 448
Ewerhardt, P. J., 106, 182, 225, 366
Fenning, F. A., 184
Fenton, E. R., 182
Fields, R. J., 106, 107, 152, 176, 365
Fong, T. C. C., 183
Forcione, E. A., 106
Foster, S. O., 34, 359, 448
Freeman, W., 106, 256
French, L. H., 34, 224, 257
Fugitt, E. W., 183, 365
Gannon, J. A., 104, 182, 257, 412, 448
Geibel, F. B. C., 365
Geier, F. A. J., 328
Gilbert, J. L., 106
Gillen, J. H., 364
Goodman, E. L., 450
Graeff, E. W., 406
Gray, A. C., 183
Gray, L. W., 365
Greear, J. N., Jr., 448
Groover, T. A., 32, 178, 185
Gwynn, H. B., 104, 149, 328
Hagner, F. R., 256, 289
Hall, C. L., 448
Hand, F. M., 256, 357
Hantman, I., 412
Hardin, B. L., Jr., 359, 365, 448
Harmon, R. H., 150, 257, 406
Harnsberger, C. W., 359, 448
Harrison, M. D., 449
Hawfield, C., 357, 359
Haws, R. J., 412
Hazen, H. H., 288, 330
Heath, A. F., 182, 359, 365, 448
Herbst, W. P., Jr., 184, 225
Hertzberg, H., 257
Higgins, E. W., 183, 452
Hightower, R. B., 35
Hilton, S. L., 225
Hixson, C. H., 183
Hobart, H. M., 35
Hoffman, H. S., 149, 224
Holden, R. T., 93, 178
Hollingsworth, R. K., 359
Hooton, A. B., 69
Horgan, J., 67, 150, 328, 361
Hornaday, F. A., 448
Hottel, R. R., 406, 448
Hough, W. H., 69, 445
Howard, W. A., 67
Huffman, G. R., 150, 357
Hunter, O. B., 62, 93, 106, 452
Hurston, M., 258
Hurtt, H., 32
Hussey, H. H., Jr., 256
Ingham, D. W., 364
Isaminger, M. P., 106, 449
Jackson, R. L., 183
Jackson, R., 223
Jacobs, J. B., 93
Jacobs, R. S., 183
Jansen, R. J., 67
Johnson, D., 223, 448
Johnson, L. B. T., 93, 452
Jordan, J. R., 183
Judson, J. H., 35
Kane, H. F., 184, 257
Karpeles, K. B. B., 104
Karpman, B., 225
Katzman, H., 183
Keilty, R. A., 448
Keliher, T. F., 149
Kelly, E. B., 359
Kerr, H. H., 288
Keyser, C. S., 32
Kirby-Smith, H., 107, 357
Klein, E., 448
Knowlton, D., 288, 328, 412
Kotz, J., 452

Krause, E. A., 183
Kreiselman, J., 256
Kulesher, H. T., 412
Kushner, D. H., 34
Lafsky, B. P., 69
Lamb, R. S., 32, 224
Laughlin, K. F., 149
Leadbetter, G. W., 35
LeComte, R. M., 34, 180
Lee, A. E. L., 406, 448
Lee, T. S., 223
Leiby, G. M., 225
Leonard, B. W., 365, 406
Lewald, J., 106, 224
Lewis, A. H., 183, 258
Lindsay, J. W., 406
Litvin, P., 152
Lowden, H. M., 359, 448
Luckett, L. F., 35
Lynch, D. F., 258, 359
Lyon, J. A., 93, 258
Lyons, J. H., 35, 182, 184, 223
Macatee, H. C., 93, 104, 255
Macnamee, A. H., 187
Mallory, W. J., 150, 224, 257, 411, 446
Manchester, B., 149, 183
Marbury, J. B., 406, 448
Marbury, W. B., 67, 93, 183, 224, 259, 448
Maret, R., 183
Marland, A. E., 448
Martel, L. A., 180
Martinez, F. A., 183
Martin, G. V., 183
Martin, W. W., 364
Mattingly, T. E., 225
Maxwell, D. L., 224
McGovern, F. X., 255, 282, 359, 360, 366
McGrath, R. S., 182
McInerney, M. J., 149
McKimmie, O. A. M., 368
McLendon, P. A., 93, 182, 365
McNitt, H. A. H., 150, 224
McPeak, E. M., 406
Meisenbach, A. E., Jr., 450
Meloy, W. C., 365
Mess, W. A., 359, 448
Miller, W. S., 183
Millwater, C. A., 67
Mistretta, F. H., 406, 448
Monat, H. A., 181
Moore, W. C., 448
Moran, R. E., 183
Morgan, W. G., 34, 150, 412
Morhart, F. H., 32
Murphy, J. A., 452
Murray, R. W., 412
Myers, W. K., 181
Newton, H. J., 444
Nicholson, M. M., 67, 93, 257, 365, 411
Nicklas, E. W., 406, 448
Nolan, J. E., 364
Notes, B., 67, 257, 451
Oden, R., 225
O'Donnell, R., Jr., 184
Ong, H. A., 103
Oppenheimer, E., 24, 182
Orem, J. M., 330
Orleans, H. B., 69, 183
Overholser, W., 69, 106, 224, 225, 258, 411
Parker, H. P., 93
Peabody, J. W., 35, 225, 259, 452
Peery, T. M., 69
Pelland, P. O., 448
Pelzman, I. A., 225
Pettit, M. B., 412
Pickford, E. M., 35, 106
Polkinhorn, H. A., 32
Prosperi, M. H., 359, 448
Quayle, E. E., 406
Raffel, W., 69
Ramsey, H. P., 93, 101, 182
Rand, A. T., 258
Rath, W. A., 258
Reed, J. A., 309, 329, 357, 403
Reede, E. H., 406
Reichelderfer, L. H., 35, 452
Reisinger, J. A., 149
Reisinger, J. C., 406
Repetti, F., 406, 448
Reuter, F. A., 365
Richwine, A. H., 357, 452
Rodis, I., 182, 224, 365
Rones, B., 67, 106
Rosenthal, S. M., 184
Ruffin, S., 93
Ruhland, G. C., 64, 176, 224, 283, 324, 444, 445
Sanderson, F. R., 448
Scala, N. P., 225
Schreiber, H. R., 178, 359, 448
Schutz, C. A., 365
Schwartzman, A. S., 406, 448
Seckinger, D. L., 224
Selinger, M. A., 448
Sexton, R. L., 35, 101, 182, 224, 328, 449, 452
Shaw, R. F., 406
Shea, F. R., 365
Sheppard, E., 106, 365, 450
Silverman, C., 258
Silverman, I. J., 448
Silvester, R. L., 288
Simon, A., 365
Simpson, C. A., 36, 107
Simpson, G. V., 256, 448, 450
Snyder, L. H., 451
Sparks, W. C., 357, 406
Speidel, F. G., 248
Spire, R. L., 152
Stanley, A. C., 186
Stanton, W. J., 359, 448
Stebbing, P. A. E., 183
Stirling, W. C., 288, 357
Stone, R. E., 364
Strine, H. H., 288
Stuart, J., 453
Sullivan, R. T., 34
Talbot, J. A., 406
Taylor, L. H., 185, 330
Tennyson, I. A., 224
Thomas, W. R., 288
Thompson, J. L., Jr., 149
Thompson, R. K., 150
Thompson, T. C., 178, 365
Threadgill, F. D., 257
Tibbets, L. B., 223
Tolstoi, G., 182, 183, 449, 452
Tonney, F. O., 152
Trible, G. B., 35
Trinder, J. H., 218
Valentine, A. W., 359
van Kinsbergen, M., 183
Veal, J. R., 256
Verges, S. F., 357
Wall, J. S., 93, 452
Warner, J. W., 322
Watts, J. W., 256
Weaver, C. A., 368
Weinstein, D. L., 182, 451
Wells, R. L., 149, 178, 181
Whipple, D. V., 106
White, C. S., 32, 256, 330, 364, 406, 450
Whitmore, E. R., 104, 182, 183, 256 356, 366
Willson, P., 62
Wilner, P. R., 69, 183, 258 366
Wiprud, T., 101, 150, 152, 255, 282, 328, 357, 359, 361
Wissler, J. E., 365
Wolfe, J. T., 454
Yater, W. M., 35, 102, 152, 225, 256, 258, 366
Young, J. R., 67, 182
Zehner, H., 406, 448

41 e 1263